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MEDICAL REVIEW.

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L. T. RIESMEYER, M.D.,

EDITOR.

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ORIGINAL ARTICLES

Epilepsy.

BY C. E. SMITH, M D, WACO, TEXAS.

Read before the Mississippi Valley Medical Association, at Hot Springs, November 20-23, 1894.

MR. PRESIDENT AND GENTLEMEN OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION:

The etiology as well as the pathology of a case are often more difficult to determine than the treatment, and in my opinion it is too often admitted that the cause of a given pathological process may not cut any figure in the case so far as the treatment is concerned. No disease nor the sequellæ of disease can be intelligently treated without first ascertaining the cause. Any treatment to the contrary is but experimental and places us upon the same plane with the Empyric whose treatment in every instance is based solely upon the expectant plan.

The subject for my paper is "Epilepsy," and it is thus that I have prefaced my remarks. I do not consider epilepsy to be a disease, although it is classed under this caption by most of our eminent authors. In the diagnosis of epilepsy, it should always be borne in mind that epilepsy is a symptom and not a disease and the question of diagnosis should be simply a question of what the epilepsy is a symptom. Just where the true seat of epilepsy is has not as yet been determined. Dissection has not thrown light on its pathology, whether in the cells having the power of producing muscular contraction at the base of the brain, in the convolutions of the hemispheres, the ganglia at the base or the pons and medulla, oblongattæ. Gray says "the epileptiform manifestations are due to a *peculiar* molecular condition of the motor track, which proceeds from the motor convolution to the peripheral motor structures (the muscles)."

Just what this *peculiar* molecular condition is, he did not attempt to define, except by the word *peculiar* which does not explain the molecular conditions producing the phenomenal symptoms of epilepsy as differentiated from those producing chorea, neuralgia, tetanus, hysteria, or any of the different so-called functional diseases. When we possess such instruments of precision as will enable us to see the play in a living brain or spinal cord, and have advanced in our methods of preparation and staining of the nervous system by which we can detect such slight cellular attractions as have thus far completely eluded our vision, we will then be able to explain the cause of the phenomenal paroxysms, not only of epilepsy but of chorea, tetanus, hysteria, neuralgia and all of the so-called reflex nervous diseases. It is claimed by some that all the nervous centers are involved but it is not probable that the lesion could involve all the nervous centers in cases where the convulsions are confined to a single limb. Generally one of the arms, or to the arm and leg of one side, and in the so called Jacksonian epilepsy, where the fit is confined to the immediate focus of discharge. In these cases consciousness is not always abolished and the epileptic may, as Julian says, "Be an anxious spectator of his own epileptic attack."

The phenomenal paroxysms of epilepsy are but the resulting factors corresponding to the intensity and stage of the disease producing them. The primary nutrition change may be the starting part of epilepsy or the nutrition change may be a part of some general metamorphosis, such as are present in the several cachexia, viz., gout, rheumatism, scrofula, syphilis and the like, causing idiopathic and symptomatic epilepsy respectively. When induced by conditions acting upon the nervous centers directly, such as mechanical injuries, we have accidental epilepsy. Peripheral irritation will sometimes produce it, consanguineous marriages, neuroses and inherited tendencies. The latter cause is said to constitute 30 per cent of all the cases, the changes occurring at the period of puberty, at pregnancy, ta the menopause, and in a small number of cases, it has existed at or developed soon after birth.

It most frequently develops between the age of 10 and 20 years. It attacks sex about equal. It may develop at any period of life, and epileptiform convultions have been produced in animals by irritation of the skin after the removal of the brain and cerebelum. The symptons are phenomenal paroxysms with uncertain intervals between them and are characterized by loss of consciousness in most cases, and by convulsive motions of the muscles. Sometimes a fit is preceded by indisposition, vertigo and stupor, though frequently it attacks suddenly.

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The ordinary duration of the fit is from five to twenty minutes, though in rare cases it may be protracted for hours. It is usually organic but may be functional or sympathetic of irritation in other parts, as in the stomach, bowels, etc. The phenominæ of epileptic seizures dif fer so widely that it would be impossible to give a description which would answer for all cases. The prognosis as to ultimate recovery is unfavorable. It does not, however, frequently destroy life but is apt to lead to mental imbecility. Perhaps there is no ill that flesh is heir to about which more has been said and written and less known than the so-called disease epilepsy.

And none, too, more unsatisfactory and rebellious to treatment. The first essential in the treatment of any disease is to make a correct diagnosis and this of course is the province of the physician. The cause should be sought after and if possible removed. Jackson, in his study of epilepsy, found that some epileptics have definite local beginnings to their fits; for instance, a twitching of the big toe, or of the fingers, or of some other definite muscular group. He held that in these cases there is a center of discharge in the portion of the brain convolution controlling that group. Most probably in the Rolandic region or in that portion of the convolution overlying the corpus striatum. Thanks to the investigation of Jackson, Flourens and Broca, and to Hipzig and Fritsch, the latter for their demonstrations in the electro-irritability of the brain certex of dogs, monkeys and other animals, and to Ferrier, the English experimentor, for his clinical demonstrations, showing the unmistakable correctness of the location of many offices in the brain and their individual functions.

The subject of cerebral localizations is a branch of physiological science which has but recently been at all understood. For a long period of time, it was believed and accepted as held by Flourens, the French physiologist, that the brain acted as a whole, but recent clinical observation has thoroughly established a differentiation in the function of the brain cortex. In lesions of the posterior portions of the third frontal convolution of the left side aphasia results, first demonstrated by Broca, and this convolution is still called by the name of Broca The centers about the fissure of Rolando preside over movement as shown and proven by Jackson. At the upper third of the ascending frontal and the ascending parietal convolutions are the leg and toe centers. At the middle part of the ascending convolutions for the arm, hand and fingers. For rotation of the head, in the first frontal convolution. The inferior part of the ascending frontal convolution presides over the muscles of the mouth, tongue and lips, and the posterior part of the third frontal convolution on the left side for articulate language, first demonstrated by Broca.

The platosma hyoides is presided over by the center near the lower end of the ascending parietal convolution. There are also sensory areas of the brain but we are mostly concerned in the motor areas. It is a well established fact that irritation or destruction of these different motor areas causes certain well established reactions, sometimes paralyses or as clinical medicine would denominate them, symptoms. And irritation of any of the motor areas will cause contraction of the muscles over which they preside. An irritation of the upper third of the ascending frontal and the ascending parietal convolutions will cause a movement of the leg. The same is true of all the other centers. With the unmistakable correctness of the location of many offices in the brain, and their individual function, we are well assured of the fact that the true doctrine of localization has begun to assert itself and it is safe to predict that in the near future the good surgeon with his trephine, will enter the cranial vault with as much impunity and reveal to the medical world many diseases of the brain and brain cortex which are not now understood, like the "illustrious", Lawson Tait has revealed to the gynecological world by his fearless but cautious explorations in the female pelvic cavity.

Thus far, the whole list of remedial drugs which have been so highly extolled from time to time in the treatment of epilepsy have given us an almost complete list of negative results except in epilepsy of syphilitic origin, and I think the utmost importance attaches to the diagnosis between syphilitic and non-syphilitic epilepsy, especially so from a therapeutic point of view. When it is remembered that the cortical portions of the brain, which are the favorite seat of syphilis, are at at the same time the seat of the motor centers, it is not surprising to know that epilepsy or rather the occurrence of epileptiform attacks is among the commonest phenomenæ of syphilitic cerebral disease. In syphilitic epilepsy the epileptiform attack may occur at the beginning of the cerebral disease, or it may occur during its course.

An important diagnostic point in syphilitic epilepsy is that the "cry" of common epilepsy is rarely uttered and there are certain other differences in the character of the convulsions. The symptoms are less marked both as to generalization, duration and intensity. Consciousness in the majority of instances is scarcely affected and the attack seems only a feeble representation of ordinary epilepsy. Syphilitic epilepsy, if left to itself, will continue to grow worse as the disease producing it becomes intensified. Unlike ordinary epilepsy it does not remain at a standstill. It may, however, grow better through the relief of the causative lesion, as when a gumma of the cranium softens and opens exteriorly. This tendency to grow worse and to result in disorders of intellect, offers a diagnostic sign of the highest value in syphilitic epilepsy.

Fournier says that "when epilepsy manifests itself in a patient of 20 to 30 years of age, it is of specific origin in eight or nine cases out of ten." Benjamin Bell tells of a woman 26 years of age, who after suffering severe headaches, was attacked by epilepsy, from four to six attacks daily. Suddenly they ceased, when she became insane and remained in this condition for two years, when Bell, who had been called to treat her for ulcers

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and osteitis, administered mercury for a few weeks, and to his great astonishment cured not only the ulcers and osteitis,but saw the mental alienation entirely disappear. Postal cured one case by excising a cicatrix upon the thumb and another by a similar operation upon a scar of the scalp. Evacuating the contents of a wounded eye, and the amputation of injured toes, and lithotomy have cured epilepsy. I find also mention made by authors of more than one case of epilepsy cured by an accidental wound or by premeditated operation. I know that the experience of many successful surgeons, who have watched their cases for a long time, is against the efficacy of surgical treatment, but I think if there is a distinct history of injury, a well marked cicatrix or a sinus leading down to dead bones, and if the epilepsy has undoubtedly been initiated by the injury, there can be no doubt of the propriety of operating especially after the failure of medical treatment.

To my mind, no greater therapeutical fallacy exists to day than the giving of drugs for the cure of all cases of epilepsy. Do not understand me to recommend surgical treatment for all cases. The efficacy of surgical treatment is best obtained in cases where the etiological diagnosis is clear and its employment confined to traumatic cases. Although in many cases where the history of an injury was obscure or where no history what ever could be obtained or where the only local evidence was sensitive, painful, or even tender spots, without any indication of inequality of the bone, the trephine has been used with permanent relief. Naucrede says: "So simple an operation as mere removal of the cicatrix and pericranium will in certain cases permanently relieve epilepsy. Out of thirty cases of the traumatic variety trephined by Dr. W. Briggs, twenty-five were cured, three relieved, one was not relieved and one died (*American Practitioner*, July, 1884). Dr. Sims cured six consecutive cases of epilepsy by the operation for lacerated cervix and perineum (*American Journal of Obstetrics*, 1893).

In the paroxysm of epilepsy but little can be done. As the tongue is liable to be injured by the teeth, the jaw should be kept open by putting a piece of wood or cork between them. If the fit has been brought on by indigestible food, the stomach should be cleared and the diet regulated to prevent a recurrence of the attack. A properly and well regulated diet is of the utmost importance in the treatment of every case of epilepsy. I have but little confidence in the power of drugs to cure epilepsy except in cases of syphilitic origin. In the hysterical form of epilepsy there is generally irritability and debility of the nervous system. Such cases are benifited most by change of scenery, climate and a removal of the exciting causes. Drugs will not cure them. Every case of epilepsy should be regarded as one peculiar of itself, and the etiology of every individual case that we are called upon to treat should be ascertained or we must expect to continue as heretofore, in the same old irrational routine plan and way of treatment. We should investigate the cause of the paroxysm and if no known cause can possibly be assigned, we should next direct our attention to a careful analysis of the various phenomenal symptoms produced by irritations of the different motor areas in the brain cortex, which I believe, when once understood, will furnish an index to the seat of lesion causing many, if not all, of the obscure cases of epilepsy. This is the province of the physician and neurologist. And when the time arrives when they shall cease to allow patient observation in clinical research to go before scientific experiment to demonstrate facts, we shall then know the best and truest friend to the epileptic, viz., the trephine.

Simple as it may appear, it requires no very small amount of skill to perform the operation of trephining, which fact probably accounts for the limited number of times it has been performed and the delay of performing it, not only in cases of epilepsy, but in many cases where its use is imperatively and speedily necessitated to relieve depressed bones in recent accidental or intended injuries. The life of the patient should never be jeopardized from a lack of knowledge and skill in using the trephine. When our better judgment dictates to us that the probable efficacy to be derived by trephining will best subserve the interest of our patient, we should not be too conservative (?) in our views on "cutting" for we may perchance mistake our timidity and lack of skill required to perform the operation for conservatism and thereby sacrifice the life of our patient.

The special instruments required for the operation are the trephine, the conical, or Galt's, being by far the safer; an elevator and rongeur, sequestrum forceps, gouges and mallet, the traditional tooth-pick and the brush to remove the dust from the track of the trephine. Of course all of the necessary preliminaries to do an aseptic operation should be rigidly observed. Shaving the patient's head, giving the anesthetic, making incisions through scalp, avoiding large blood vessels when possible, laying back flap together with periosteum covering portion of bone to be removed, lowering and fastening center pin of trephine, holding trephine, force used and removal of button require no explanations to the skilled operator.

The trunk of the middle meningeal artery is located an inch and a half behind the external angular process of the frontal bone and the same distance above the zigoma. The median line of the skull from the root of the nose to the occipital protuberance corresponds to the superior longitudinal sinus. A line drawn from the occipital protuberance to the anterior border of the mastoid process corresponds to the lateral sinus on either side. And the torcular herophili placed a little to one or the other side of the internal occipital protuberance should all be avoided for reasons obvious. The cleaning of the wound, adjusting the flap, suitable drainage established, and the antiseptic dressing applied completes the operation. But this is not all. We should still watch the case lest some other source of peripheral irritation should arise, such as a painful cicatrix, which

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would then require excision. Judicious after-treatment will sometimes relieve an apparant operative failure and one of the sources of failure in operations for epilepsy is the neglect of after-treatment, medical as well as surgical.

Auto-Infection.

BY T. F. MARTIN, M.D., BRUNSWICK, MO.

Read before the Grand River Medical Society, December 6, 1894.

By auto-infection, we mean self-infection, or infection occurring from causes produced within the body.

In treating of auto-infection we will necessarily have a good deal to say of bacteria and bacilli which are the germs that find entrance into the body and there set up a diseased action; also, the products of these germs in their action on the tissues—ptomaines, leucomaines, toxines, toxalbumins, etc.

Ptomaines are the products of putrefactive decomposition and there would be no putrefaction but for bacteria.

Leucomaines are the results of fermentative changes and retrograde tissue metamorphosis.

When we consider that we have instances of auto-infection in such every-day and fatal diseases as pneumonia, consumption, typhoid fever, diphtheria, septicemia, etc., we can begin, but only begin, to realize its importance; bacteriology has opened up a field in this direction investigation of which is as yet only in its infancy and along the line of which we must look for the future triumphs of medicine. The discoverers, no doubt, will frequently stumble as they grope for light, for it is a wide field, yet each day will see the search-light penetrating more deeply into its recesses.

Dr. Sternberg says: "Although in the scale of living things man stands at the head, and the microbe, on account of its minute size and simple structure at the foot, yet the relations of the one to the other are more important and more complex than the relations of man to any other single group of living organisms between him and the microbe; from the moment of his birth to the day of his death, he is surrounded by these agents of destruction."

The tubercle bacillus is said to be ubiquitous, and we can have some idea of its universal prevalence when we understand that it has been estimated that a phthisical patient will expectorate from one to four billions of the bacilli in twenty-four hours. The sputa soon dry of course; the bacilli are liberated and scattered to the traditional four winds. We are constantly inhaling them with the air we breathe, taking them into the intestinal canal with our daily food—especially cow's milk.

In the battle for the survival of the fittest, those of us who inherit vigorous constitutions and keep our systems robust are enabled to cast them off unharmed; but let them find our fortifications unguarded, a weak spot in our armor, and there they fasten themselves, set up a diseased process, become localized and many remain so for years, possibly latent and unsuspected until through auto-infection the general system becomes contaminated either by the rupture of a caseous pulmonary nodule into a vein, a caseous bronchial gland into one of the pulmonary veins, or possibly by the invasion of the thoracic duct by tubercle or by the ulceration of the localized diseased tissue and scattering of infected material throughout the lungs by coughing, inspiration or expiration; and thus by auto-infection setting up new foci of disease.

Strumpell says: "We must look for the cause of the fever not in the tuberculosis itself, but in the absorption of septic substances from the decomposition of the secretions of the bronchi and cavities."

In pneumonia the bacteria in the lungs produce a poisonous substance called pneumotoxine which is absorbed into the circulation producing the characteristic constitutional symptoms of pneumonia.

The Klumperer brothers claim that this pneumotoxine while in the circulation produces a third substance which they call anti-pneumotoxine, and which when produced neutralizes the pneumotoxine and precipitates the period of crisis by producing temporary immunity against the effects of the pneumotoxine, they claiming to have proven by experiments that the blood serum or fluids of the body of an animal thus rendered immune will produce immunity when injected into the circulation of another animal, will in all cases reduce the temperature, and in a fair proportion cure the disease when already existing.

Now, gentlemen, here is indeed an interesting field for thought and investigation; according to this it is not only through auto-infection that the constitutional symptoms of diseases are produced, but through auto-infection that self-limiting diseases are by Nature cured.

Bacteriologists claim and prove by experiments that they separate from cultures of the pneumococcus a principle called pneumotoxine, which, when injected into an animal produces constitutional effects similar to the ordinary symptoms of pneumonia. They now separate from cultures of the pneumotoxine a third principle called anti pneumotoxine which when injected into an animal produces temporary immunity against the effects of pneumotoxine not lasting longer than six months, and wher injected into an animal already infected with the pneumotoxine will in every case produce a lowering of the temperature which in some cases is permanent.

Now if in pneumonia the toxine itself produces an antidotal substance which renders pneumonia self limiting and establishes immunity against an immediately succeeding attack may it not be that along this line we are to look for the self-limitation and immunity found in most of our other infectious diseases.

Diphtheria is at first a local disease produced by the Klebs-Loeffler bacillus which is found in the pseudo-membrane but not in the subjacent mucosa, in the

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blood, or in the internal organs. The subsequent constitutional symptoms being the result of auto-infection. The bacilli in their action upon the false membrane produce a toxalbumin which is one of the most virulent poisons known, and when separated and injected into animals produces paralysis, nephritis and albuminuria; symptoms similar to those produced when absorbed into the system of a diphtheritic patient. A substance also antidotal to the diphtheritic toxalbumin is said to have been found in the blood serum of animals recovered from diphtheria, which when injected into the veins of other animals renders them immune, and has a favorable or curative influence on the course of the disease when injected in the patients already infected with diphtheria. Prof. Erlich reports seventy eight cases treated within the first forty-eight hours, by injections, with only two deaths. And out of a total of 1180 cases treated by injections in the different hospitals of Europe the mortality was twenty per cent, whereas, formerly it was near fifty per cent.

A tetanus bacillus has been isolated and cultivated, and from these cultures ptomaines have been separated which when injected in the animals produce the characteristic symptoms of tetanus, together with tremors, convulsions and paralysis; and it has also been found that the blood of animals that have had tetanus will produce immunity when injected into other animals.

In commenting on recent investigations in this direction the *Railway Surgeon* says: "If it be true that diphtheria has been cured and that tetanus has been robbed of its virulence by antitoxine medication, certain it is that a new era in medication now opens to the medical world. Fortunate, very fortunate is the physician who has seen this epoch, commencing with Pasteur and the practical application of his ideas by Lister. He has seen the world benefited by the application of aseptic and and antiseptic methods to such an enormous extent that when the history of their application and result is told in truthful lines and in a plain unvarnished way it seems an improbable story or at least an intense exaggeration."

Typhoid fever is produced by bacilli which find their way into the intestinal canal; and Osler says, "it is in the highest degree probable that the constitutional disturbances, fever, etc., depend upon the toxalbumins produced in the growth of these bacilli."

Septicemia is defined by Osler as a general febrile infection which results from the absorption of toxic materials produced by bacteria.

Leaving the specific diseases and turning to the excretions we find a prolific source of auto infection, for there are putrefactive fermentation and chemical changes constantly occurring in the tissues themselves; the products of which must be eliminated or else absorbed into the circulation to create disturbances.

Although in health we are having continually generated within us elements toxic in their nature, still, so long as all the organs perform their functions perfectly or up to the normal standard these toxic substances can do no harm; but let there be a solution of continuity or a cessation of physiological function so that the poisons are not eliminated, or the tissue soil in furnished for the growth, development and general activity of bacilli and the general system become infected.

Dr. S. W. Hickman, of Tacoma, Washington, says: "In the normal process of digestion of ordinary foods there are found at certain stages products which, if thrown into the circulation will produce alarming symptoms and even death; a solution of them as they occur in the stomach as the result of gastric digestion or in the small intestine as a result of the pancreatic ferment when thrown beneath the skin or into the veins of an animal has been constantly found to produce coagulability of the blood, lowered blood pressure, and if in sufficient quantity, death.

"There are also certain microbes that normally inhabit the intestinal tract as well as the other mucous surfaces and play an important role in the matter of self infection; they resist the action of the digestive ferments and some of them are said to secrete ferments having identical effects with the normal digestive ferments; some of these bacteria by their action on albuminous foods are capable of producing peptones and albumoses, and these albumoses are among the most poisonous of all substances, and by being absorbed from the digestive tract become important factors in many pathological processes.

"There are said to have been isolated from the urine seven separate toxic principles, one a diuretic, one a narcotic substance, one produces salivation, one is a mydriatic, one is antithermic, and two are convulsive. The reason these poisons in the urine are ordinarily harmless is that the urinary tract is a non-absorbing surface, but rob it of its epithelial covering at a point where the urine is constantly in contact with it, and the system becomes speedily intoxicated."

From the above it would appear that we are indeed a laboratory of poisons and continually on the brink of destruction from internal and natural causes; and but for our inherent resisting power we would be bound to succumb; this resisting power consisting of the fact that we have excretory organs which throw off some of the poisons and neutralize others. It has been demonstrated that poisons which produce only slight effects when injected into the portal vein, will kill after tying the portal vein, furnishing positive proof that the liver destroys a certain amount of toxic substance. The blood serum does the same thing, and this seems also to be the function or one of the functions of the white blood corpuscles, a knowledge of which fact is now being applied to practical therapeutics.

Dr. John Audale, of Philadelphia, in a recent issue of the New York *Medical Record*, says: "More than ten years ago Prof. Metschnikoff taught that leucocytes or phagocytes performed an important service to the human organism, namely, that they enveloped or surrounded bacteria and destroyed them as well as bacterial products. Within the past year, however, several

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scientistists have demonstrated that leucocytes through their nucleus produce a phosphorized proteid termed nuclean which possesses active germicidal properties."

These researches covered not only the test-tube observations, but experimental studies upon animals, and showed conclusively that solutions of nuclein employed in seasonable time would confer immunity against disease, and thus a new factor was added to the modern ides of cellular therapy, that of nuclein therapy.

The development of this modern idea in scientific medicine is but a question of time, since it hinges altogether upon actual facts, speculative hypotheses being kept entirely in the background. Even now clinicians and experimental physiologists are earnestly at work in the expectation that they can further advance the art of healing, and doubtless, ere long, we shall have the satisfaction of asserting that practical medicine is really in fact, as well as name, scientific medicine.

A Case of Supra-Pubic Lithotomy.

BY LOUIS HAUCK, M D., ST. LOUIS.

Read before the St. Louis Medical Society, Dec. 1, 1894.

This case is reported for the first time simply to place it on record.

R. N. H., 45 years old; nativity, England; engineer; married; family history good; habits good.

In July, 1879, had an attack of renal colic which came on suddenly while walking. He was taken home, suffered for several hours, but next day felt perfectly well. Had no trouble until 1884, when one day he suddenly found himself unable to pass his urine. A physician was consulted, who pronounced his case one of stricture, probably because patient admitted having had gonorrhea twenty years previous. He was treated with sounds off and on for three years, when he was pronounced cured of his stricture. As he would be obliged to have urine drawn every few months on account of sudden inability to pass it, he consulted another doctor. This one pronounced him as suffering with catarrh of the bladder, but gave him no relief. He consulted four other doctors, two in St. Louis and two in East St. Louis, and all told him the same thing, namely, that he had catarrh of the bladder and stricture. In August, 1892, he finally went to Hot Springs. There a prominent specialist examined him and found 5 strictures and a bad catarrh of the bladder. Next day the patient had high fever and could not void his urine. The doctor called at the hotel and drew it off. Patient says it was strong enough (the smell) to knock a man down. His bladder was washed out daily, the strictures were cut, and after two weeks of this treatment he was sent home well. One week after his return, being as bad as ever, he came to my office.

PRESENT CONDITION.—Pain in penis increased on motion or exercise. Passes urine about every one and one half hours, and 2 or 3 times at night. Urine pale and offensive, sp. gr. 1016, contains mucous and pus. Patient looks pale and careworn and had lost considerable in weight.

Having listened to his history, as above, I made an examination of his bladder with a large sound, which, by the way, passed into the bladder without resistance. It struck upon the stone, and by striking same I convinced my patient that he had a stone in his bladder. Four days of preparatory treatment put him in condition for an operation.

On September 1, 1892, I made a supra-pubic lithotomy, assisted by Drs. E. F. Hauck and M. J. Epstein. Dr. A. Goldsmith administered the anesthetic. The patient had been properly prepared by shaving the genitals, etc. Used colpeurynter, or rectal bag, inflated with air. The bladder having been washed out, it was filled with sterilized water. A rubber tube was tied around the penis to prevent evacuation of the bladder. Incision was made two and a half inches long, extending down to the symphysis pubis. When the bladder was reached, two silk threads, one on either side of the median line, were introduced through the muscular coat, and given to an assistant. The bladder was then opened by an incision large enough to admit the finger. The size of the stone having been determined, the opening was enlarged and the calculus, which was loose in the bladder, was removed with dressing forceps. A syphon rubber drain was inserted, the elbow being composed of glass tubing. The wound was partly sewed up, and the elevating threads left in place and secured. Rectal bag and rubber tubing about penis removed, wound dusted with iodoform and dressed.

On day after operation slight arsenic symptoms occurred, which subsided, however, after a few doses of sweet spirits of nitre. On third day drainage tube and stitches were removed.

Fourteen days after operation the wound had entirely healed and patient emptied his bladder perfectly and without pain. At the end of four weeks he was back to work, feeling better than for many years previous. Saw him on November 18. Looks well and is well. Weighs fifteen pounds more than he did two years ago.

The stone, which I here present, is the one removed, and weighs just one-half ounce. It is of the phosphatic or soft variety.

This case is interesting as it shows how carelessly many physicians are in making a diagnosis. I am convinced that this patient never had a stricture, except of the spasmodic variety, and that his occasional inability to pass his urine was due to the presence of the calculus. I believe that the real calculus, which caused him so much pain in 1879, forms the nucleus of this stone.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st. That intended for the Veterinary Department to T. E. White, D.V.S., Sedalia, Mo.

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The Annual Election of Officers of the St. Louis Medical Society.

If it was not incompatible with the dignity of a journal like the REVIEW, we should like to decorate the head of this page with a series of pictures of the bird that, in politics, is looked upon as the emblem of victory.

A victory indeed it was, a glorious, sweeping, overwhelming victory which the reform element won at last Saturday's election over a class of members, which have been looked upon with disfavor, perhaps even disgust, by a very large majority of the St. Louis Medical Society. After the smoke of the battle has cleared away, it is astonishing to see, how insignificant the forces of the enemy have been, and how, by clamor and noise the warriors for professional dignity could be deceived.

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Nineteen to one hundred and three. These are the numbers that illustrate the situation. Only nineteen members could be drummed together for the purpose of voting for a candidate who was to represent the element inimical to the four fifths rule prevailing at the election of new members. If it is borne in mind, that this faction constitutes a compact mass, is well organized, and ever alert to be on hand, whenever medical "progress" is on the topic, it is to be wondered at, that so few votes have been polled in that quarter.

As it is, it was another instance of "Love's labor lost." It would seem that this combination is the most unpopular one with the medical profession, which St. Louis has seen in many a year. Now is the chance for them to form that much talked of new society and walk out *en masse;* they will have the parting blessing of the remaining members. Nor is there now any obstacle in the way of making the Pathological Society the most flourishing, *i. e.*, the best advertised in the West.

Considering the small number of this faction, it is truly marvelous, how they have managed to make the lay public, and, no doubt, also a portion of the outside medical profession believe, that they were the representative men of the St. Louis Medical Society. The fact is, during the last year they succeeded in running it. Will they try it in the coming year? On a former occasion we have said, that owing to peculiar mental organization, they never know, when they are whipped. In fact, to get whipped, snubbed, rebuked, shoved aside, ignored, etc., etc., has become second nature with them. So we confidentially expect to see them bob up serenely under the present administration, ready to carry on their work of "progress," which other members call malicious mischief.

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These facts must be stated, in order to enable the reader who is not familiar with St. Louis medical politics, to understand the perpetual quarrels, which the papers foster and gloat over. In former years it was only one individual, who is utterly obnoxious to the bulk of the profession in St. Louis, that caused the trouble; this time there were two, knocking at the door for admission.

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Now, as on former occasions, it is a college question. A member of the faculty, desirable and highly prized as a student catcher (by hook and crook) but in bad odor with the profession, does not feel happy, because the Medical Society closes its doors against him. He will continue to feel unhappy for a good many years to come, judging from present indications.

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It is now demonstrated, that the ways of the Indian, who by whooping and yelling tries to give the impression of superior numbers, "won't go" in the Medical Society.

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We have elected a clean ticket throughout. Especially gratifying it is, that such men as Mooney and Fry are at the head. Their election is a rebuke to the methods which the chief advertiser of the Society has, as he claims, forced by law, seen fit to pursue. It is a victory for medical ethics and a blow to the reporter. How would they have crowed, if the "progressive" coterie had carried the day. What flaming headlines would have decorated the Sunday newspapers, if their pets had come out victorious. As it was, there were very diminutive headlines, and an undertone of defeat and dignified resignation perceptible in the accounts in-

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forming the public of the result of the election.

Even the best friends of Dr. Mooney would not have imagined that it would be such a "walk over" with him. He got elected on the first count. This is the more gratifying, as it caused a number of gentlemen of the opposing ranks to settle their account with the treasurer, a moral, but also a financial success, which marked last Saturday's election. It was at the same time a Waterloo for the "progressive" (cheap ?) colleges.

The newly elected officers of the St. Louis Medical Society are:

President—Dr. Frank D. Mooney.
Vice-President—Dr. Frank R. Fry.
Secretary—Dr. G. E. Alvord.
Corresponding Secretary—Dr. C. M. Nicholson.
Treasurer—Dr. J. B. S. Alleyne.

A Suggestion to the Reform Administration of the St. Louis Medical Society.

To the present reform administration of the St. Louis Medical Society, we would suggest the following iron clad resolutions:

WHEREAS, Misleading reports of the proceedings of this Society, casting reflections on some of its members, have repeatedly appeared in the daily press; and,

WHEREAS, By such practice the work of this Society is apt to be impaired; therefore, be it

Resolved, 1, That henceforth only members and invited guests shall be admitted to the hall of this Society.

Resolved, 2, That five dollars per month be appropriated for the purpose of hiring an usher whose duty it shall be to see to it that none but members or invited guests be admitted to the Society's meetings.

Resolved, 3, That the Treasurer of the Society be authorized to employ a proper person for the object named.

Resolved, 4, That the names of invited guests present shall be stated by the President to the Society at every meeting.

A New Electric Ambulance Car.

In St. Louis the event of the outgoing year has been the inauguration of a new electric ambulance car by the introduction of which the Health Commissioner, of this city, Dr. Geo. Homan, has furnished another illustration of his reform policy and practical mind in everything appertaining to public sanitation. In a few days the temporary electric ambulance service which has been in use several months will be replaced by an elegant car expressly constructed for the ambulance service. The car was made by the St. Louis Car Company and presented to the city by Mr. John Scullin, President of the Union Depot Railway Company. It made its first trip with the Health Department and street railroad officials and invited guests on December 27, 1894. The car left Twelfth and Pine Streets at 7:30 P.M., ran to Grand Avenue and Arsenal Street and back to Eighteenth Street and Clark Avenue, where the party disembarked in order to attend a banquet at the Union Station Cafe, tendered by Dr. Homan to his invited guests. A beautiful floral representation of the new ambulance, made of roses and lighted with small incandescent lights, was mounted upon a table at the end of the hall appropriately surrounded by United States flags. The table was beautifully decorated with cut flowers and evergreens and silver candalabra, the wax candles surmounted delicately tinted shades, producing a most exquisite effect.

All the guests, including ourselves, were impressed with the importance of the occasion and proud of the fact, that St. Louis is the first city in the world who has solved the problem of the most humane transportation of the sick and wounded. The car is so constructed that it produces no perceptible jar even when it is turning around a street corner.

Its exterior is of an immaculate white color, trimmed with gold and blue. The lettering on the side reads. "St. Louis Health Department, Ambulance Car," and the last two words are repeated on each end. The Geneva cross is displayed on the sides and ends to indicate the charitable mission of the vehicle.

The furnishings and equipment, supplied by the Health Department, consist of eighteen plain folding chairs, twelve having arms and six without arms, all provided with rubber fenders to prevent slipping and defacement of the woodwork.

When in service it is proposed to man the car with a physician, who shall be known as Ambulance Surgeon, having equal rank to Assistant Dispensary Physician.

A male attendant with grade of day nurse to also serve with the car, besides a motorman to be designated by the Union Depot Railway Co, both in uniform, and under the orders of the surgeon while on duty.

A time card will be prepared and published in order that the police and public know when the car will be due at a given street or a designated point, enabling patients to be delivered aboard the car with but little handling or delay. This service, however, will necessarily be somewhat crippled and inadequate until such time as track facilities to the several institutions are provided and patients can be landed under shelter at their doors; but this want will no doubt be supplied in due time. The experimental service begun by the department early in autumn, with an ordinary car, proved the utility and superiority of this method of handling patients so conclusively that it could not be discontinued without detriment to the department.

The total length of the car is 33 feet, including the platform, the inside measurements being 24 feet long by 7 feet, 2 inches wide. The platforms are about one-half the width of the car, and front the left half of the body, the car being double-ended the steps leading to the entrance and not to the platform. The doors are

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located at the right hand side of the ends of the car, the steps being four in number placed obliquely and affording access from either front or side with equal ease, this arrangement having been adopted to facilitate the exit or entrance of litter bearers. A telescoping brass hand rail guards the outer side of the steps, and these are so arranged that they may be lifted when not in use, thus preventing access to the car. The entrances are 5 feet 2 inches in width, the doors moving on rollers placed at the top, and grooved below over a metal edge secured to sill excluding cold and dust.

The car is lighted by seven windows on each side, 28x28 inches in size, stationary, the lower half frosted. There are two drop sashes in each door, and a number of ventilators or adjustable deck-lights above on the sides and ends.

The interior of the car is divided in the middle by a wooden partition 5 feet 6 inches long, placed 4 inches from the floor with two doors swinging either way in the center, one compartment being for males the other for females. The partition is so constructed that both parts may be swung back if desired and rest closely against the sides of the car. A drop desk is hinged to one side of the partition for the surgeon's use. Two hinged shelves are provided attached to the sides of the car, on which to place dressings, instruments, etc.

To the right of each door on entering the car is a large locker for litters, blankets, towels and the like, while between the windows are eight small ones for papers, medicines, bandages; instruments, etc.

Immediately back of the large lockers are two earth closet conveniences (Heap's patent) for both sexes.

Electric bells communicating with both platforms are placed near the middle of the car for the use of the surgeon. A lavatory is also located there, supplied with water by a pump from a tank under the floor, the metal work being silver-plated, as are the water coolers at each end of the car.

The interior is finely finished in cherry, there being no spaces for dirt to accumulate. The floor is of quartered oak, double, with asbestos filling to deaden sound. The ceiling is of birds-eye maple in panels. All the trimmings are solid bronze, polished.

Lighting is secured by ten incandescent burners, 16 candle power each, four being placed in each compartment and one outside above each platform. The car is warmed by six electric heaters placed along the sides just above the base board and occupying but little space, being 30x8½x3 inches in size.

The car is mounted on two pivoted trucks of special construction, having two sets of equalizing springs over the oil box in addition to the springs that carry the car body. This truck will greatly reduce the noise while crossing other tracks and make it an easy-riding car.

Under the center of the body of the car a space is enclosed in which to carry stretchers, splints and the like; and a water tank and ice box are also provided under the car. The distance from the body to the rails is 3 feet 3 inches. Draw bars are provided in case it becomes necessary to tow the ambulance by means of another car. The car is equipped with an electric brake besides the usual hand brake, and arrangement is made for heating by electricity the water used in the lavatory.

* * *

We have on a former occasion already expressed our opinion with regard to Dr. Homan's qualification and efficiency as a Health Commissioner and were pleased to note at the dinner given by him, that the opinion of all the guests seemed to coincide in this particular with our own. It is to be hoped that Dr. Homan will remain in office long enough to effect further reforms. We confidentially look forward to the Doctor's re-appointment in office and a consequent progress in sanitary measures (particularly in our hospitals) which will compare favorably with those of any other city in the world. We are in duty bound, however, to add, that the other members of the Board of Health, Drs. Forster, Robinson and Merrell, and last, but not least, Hon. Chas. Nagel also deserve great credit for the very energetic support of Dr. Homan's reform policy.

Diphtherial Culture Outfits for Physicians' Use.

A recent practical innovation of the St. Louis Board of Health is the furnishing of culture outfits for free distribution to physicians. The tubes may be had on application at the office of the Health Department, and have also been placed with the druggists named below:

Allen, 700 Olive; Braun, 2631 Gamble; Godron, 3337 Chestnut; Hemm, 3907 S. Broadway; Heyer, 501 Franklin Ave.; May, Garrison and Washington Ave.; Sassmann, 2001 Park Ave.; Schoenthaler, 1800 Sidney; Sippy, 3849 Finney Ave.; Temm, 1926 N. Grand Ave; Westminister Pharmacy (Allen), 4267 Olive; Wurmb, 18th and Salisbury.

A circular sent to the physicians of St. Louis by the Board of Health contains the following directions:

"The patient should be placed in a good light, and, if a child, properly held. In cases where it is possible to get a good view of the throat, depress the tongue and rub the cotton swab gently, but freely, against any visible exudate or patch.

"In other cases, including those in which the exudate is confined to the larynx pass the swab far back, avoiding the tongue, and rub it freely against the mucous membrane of the pharynx and tonsils. Without laying the swab down, withdraw the cotton plug from the culture tube, insert the swab, and rub that portion of it which has touched the exudate gently but thoroughly back and forth all over the surface of the blood serum. *Do not push the swab into the serum, nor break the surface in any way.* Then replace the swab in its own tube, plug both tubes, put them in the box, and return the culture outfit at once to the station from which it was obtained.

"The tubes will be received and report furnished by

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the Department within twelve hours, by mail or telephone, giving the results of the bacteriological examination without charge."

The culture medium is the same as that first recommended by Loeffler and is already in use in the city of New York. We wish to congratulate the Health Department upon the prompt adoption of this scientific method of diagnosis.

For the Feeble-Minded.

At the last meeting of the Missouri State Medical Association a committee was appointed to urge upon the next Legislature the matter of providing in the State of Missouri an institution for the care and training of feeble minded children. We hope the committee is making an active canvass and that they and all friends of the movement may succeed in impressing our legislators with the importance of the matter.

Very slight inquiry and investigation satisfies us that there must be hundreds of children in the State in sad need of the protection that can only be provided in a suitable institution of this kind. It has been abundantly demonstrated that special institutions for the purpose is the only solution of the problem of caring for this class of dependants. Not only is this true, but nineteen of our States, to say nothing of other countries, have already realized the advantages of possessing public institutions for this purpose. In some of the Eastern States they were established almost fifty years ago, and public interest on the subject increases yearly. It is not only in the East that we find these institutions, for amongst the nineteen States possessing them we find California, Illinois, Indiana, Iowa, Kansas, Kentucky, Minnesota, Nebraska, Ohio and Washington. We can not understand why our State has been neglecting the matter so long. We must not overlook the fact that in population we are the fifth State in the Union. This means that we certainly have a very large number of feeble-minded who are practically uncared for. We see plainly that it is our duty to do all we can to hasten some action on the part of the State to move in the matter. We hope that our many friends, especially amongst the physicians of the State, may give the project their cordial support.

A New Post-Graduate School of Medicine.

We have been informed that St. Louis is to have a new Post-Graduate School of Medicine, and that its faculty will include some of the best known specialists in the city. If the rumor is correct our prediction some six or eight months ago that the establishment of the twelfth medical college in St. Louis will soon be accomplished, has been realized.

Now is the time to subscribe for the MEDICAL REVIEW

CORRESPONDENCE

Experience with Morphine.

Editor MEDICAL REVIEW.—I have an experience which I believe will prove instructive as well as an example to those who may read it.

In 1876 I attended my first course of lectures at the Indiana Medical College and the use of the hypodermic syringe being the subject of a lecture by one of the professors, my curiosity being aroused, I bought an instrument. Its use was slightly known at that time. I was somewhat affected by asthma, and the hypodermic use of morphine being highly recommended, I concluded to try an injection. I was at once relieved, besides a most happy intoxication came over me. Not thinking of the danger I was in, I used it upon the slightest indisposition.

I kept this up for about two weeks and when I attempted to lay by the instrument, I realized that I was completely under the influence of the drug. From that beginning I became habituated to the use of morphine.

From the smallest dose I increased the quantity till I used ten grains a day.

When I first began using it I was a man of buoyancy of spirits, in the best of health, and in three months after I was quiet and morose, having no use for society, and my greatest desire being to stay at home and read, using the needle at the same time and enjoying the operations, similar to a man who smokes and reads.

I continued thus for about one year, when I went to Kansas to look for a location. I settled in an isolated town, and in about one month I found, to my horror, that the glass cylinder of my syringe was broken. I at once sent to Indianapolis for a new one, but by the next day I was suffering greatly.

You might wonder why I did not take the drug by the mouth, but I did not. Instead, I used fifteen grains of chloral every two hours. After the first day I did not suffer much, and in about a week my syringe came. I at once took a dose and it was but a few moments before I thought my time had come, as my pulse ran up to 150 per minute and I became greatly prostrated.

Had I used a second injection I would have lost my life. I was thoroughly frightened and did not use any more morphine.

I weighed 160 pounds at that time and I gained a pound a day till I weighed 190.

I became my old self again. I had no desire to be alone, but wanted to have all the fun going.

I only wish I could close my article here and not have more to tell about this terrible monster, but poor, miserable, human nature again fell into the toils of the enemy.

I had not suffered enough in getting rid of the drug. One year after I was free I was enslaved again. I used

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the drug for ten years, and owing to the conviction that I either had to die of consumption or stop its use, I made a most heroic effort to drop the burden, but alas, its fangs had penetrated too deeply my vitals to so easily rid myself of it.

I was then taking twenty grains a day, half in the morning and half in the evening.

I placed myself under a kind brother physician for treatment and left off suddenly after taking my evening dose. All went well till about noon the next day, when I began to feel chilly sensations over my body and yawning frequently. I did not sleep any that night, and the next morning I was suffering the agonies of hell. I could eat no food and was soon so prostrated as not to be able to help myself.

By the third day I could not stand alone, my back caused me the most intense pain, and from my knees down I suffered unbearable agonies. I could not sleep day or night, became thirsty, my feet were so hot that I had to have cold pans and other articles applied to them.

I can not describe that terrible feeling which caused me to throw myself from one side of the bed to the other—a feeling as though my nerves were being plucked from my body, and my brain being torn from my skull. Who can describe it? That feeling that puts one within the region of hell.

About the fifth or sixth day I began to vomit and by no effort of my own, I would eject large quantities of yellowish fluid.

This kept up every hour for twenty-four hours. Gallons of it came from my stomach Then began that awful thirst which could not be quenched, and I could not touch water. The constant loss of the fluids of my blood began to tell upon my already reduced strength.

After suffering from thirst worse than ever did a ship-wrecked sailor, I began to beg for ice. Oh, for one taste of that delicious crystal! This was midnight and there was no ice within twelve miles, but no man could resist my pleading. I had a kind hearted doctor to attend me and he sent a man after some ice.

Never did any one wait and listen as I did for the sound of the buggy's return. It came and I was given a small piece and retained it. I was able to control the terrible thirst and the vomiting became less, stopping the next morning.

But it had done its work. I became so weak that the physician said I must die. Not to me, but to my wife, and she sent for other doctors who advised a small dose of morphine which was given me, and of course it was the panacea.

I soon gained a little strength and on the ninth night I got a little sleep, the first time I had closed my eyes since the first night, or over two hundred hours; nor had I tasted food.

My effort was a failure.

Who, after reading this experience will ever try to cure this habit by sudden withdrawal? How easily could I have quit it if I had gradually reduced the quantity to one grain and then stopped entirely, had I exercised the same nerve and will power, for I did not ask for the drug once till it was given to me by the doctor, and I saw failure was certain. (I will probably be able to prove this assertion as I am about ready to make the third attempt. I injured my kidneys in the last attempt and I am afraid I now have diabetes mellitus. I have all the symptoms of the disease, but from the fact that I have not yet begun to lose flesh, weighing 180 pounds. I hope to be able to cure myself by stopping this habit).

The treatment in my case was at first chloral, till I got so sick of it that I could not smell it. Then bromide of soda was given till I began to vomit, after which I could take no medicine on my stomach. Electricity proved quite a help, especially in quieting the pain. Bathing was resorted to with benefit. I would be pleased to receive any comment on the treatment of the habit.

W. H. B.

The Bougie.

Editor MEDICAL REVIEW.—I noticed in the REVIEW of December 15, 1894, Dr. Gant's article which is all well enough I guess. But I object to the medical rhymes of Erichson. A repetition in so short a poem should not occur; while it *may* be admissible, it is not elegant. Line 8, "And pass a small bougie," is all right, but line 16 should be, "And pass a No. 3." Thus avoiding the practical repetition; also that of the bougie. Bougies should only be introduced when absolutely necessary.

T. M. R.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening Dec. 1, 1894, the Vice-President, HEINE MARKS, M.D., in the chair.

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DR. LOUIS HAUCK reported a case (see page 6) of

SUPRA-PUBIC LITHOTOMY.

DR. H. JACOBSON considered the supra-pubic operation more advisable than the perineal one, on account of the great danger of wounding the ejaculatory ducts, and the liability of profuse hemorrhage attending the perineal operation. Then, too, considerable tenesmus results from the perineal operation, which, added to the exhaustion from long continued cystitis, may lead to a fatal result.

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The supra-pubic operation may be done in two sit-

tings. The first operation consists in cutting down to the bladder, stitching the fat and faciæ together, and packing the wound with gauze. The operation is completed in three or four days by incising the bladder. In this way the danger of a septic infiltration of the prevesicle space is reduced to a minimum.

Dr. A. H. Meisenbach related a case operated upon by him Oct. 31, 1892; and which had a bearing on the point suggested by Dr. Jacobson.

The patient was 3 years of age, and the specimen a small mulberry calculus. No difficulty was experienced in reaching the bladder, which is higher up in children than in adults and renders the supra-pubic operation more desirable on that account. The manner of establishing drainage and dealing with the bladder wound constitutes the debateable point. In this case there had been no cystitis nor infiltration of the bladder walls. The bladder wound was therefore closed by a row of interrupted silk sutures passing only through the muscular coats, and the abdominal wound was packed with iodoform gauze. Drainage was established through the penis, septic infiltration of the prevesicle space occurred on the third day and the patient died.

Although there is a great difference of opinion in regard to the after-treatment, suturing of the bladder wound seemed indicated, as there was entire absence of inflammatory process. Speaker said he would be tempted to try it again in a like case, but would, in that instance, employ a double row of sutures.

Dr. Pinckney French expressed himself as decidedly opposed to the supra-pubic operation in ordinary cases. It is permissible only where the stone is encysted and where it is so large that extraction through a perineal wound would not be practicable.

The supra pubic operation is more difficult to perform, it is more dangerous, and there is great liability of a fistulous opening remaining. The difficulty lies in finding a contracted bladder. The low rate of mortality attending the perineal operation is not found in connection with the abdominal method. Even before the days of antiseptics the former was not considered dangerous, and since then over 100 successive operations have been done by one operator without a single death. Another source of danger is emphasized by results, such as that reported by Dr. Meisenbach. The danger of septic infiltration is always great, and this is increased when the peritoneum is opened in those cases where it extends unusually low down. In some cases it is impossible to prevent incising it.

Drainage must be established in every case, as, in the speaker's opinion, no case of stone in the bladder can occur with an entire absence of cystitis. This drainage increases the liability of a fistulous opening remaining.

The perineal operation need not be complicated with a wounding of the seminal or ejaculatory ducts, if the operator is versed in the anatomy. Hemorrhage, too, is of minor importance, as there are no important vessels in this region, and even if it should occur it is easily controlled with the means at our disposal. Drainage through a perineal wound is unequaled in any other operation.

Dr. F. J. Lutz had done the supra-pubic operation a number of times, and considers it one involving many points of surgical technique.

The first point which suggests itself is the raising of the bladder above the pubes to make it more accessible. This, speaker said, he accomplished formerly by a rectal bag, or by injection into the bladder of some antisptic solution. In these operations the condition is often complicated by enlarged prostate, which is a very unyielding body and thereby defeats the purpose of the rectal dilatation. The injection of fluids into the bladder is dangerous on account of the force exerted and the consequent liability of rupturing the bladder walls. Both proceedures have therefore been abandoned by him, and substituted by dilatation of the bladder with air, which is introduced by the Allen pump or the Davidson syringe and retained by compressing the urethra.

The greatest danger in supra pubic lithotomy is the liability of wounding the peritoneum and the septic ureal infiltration following. Ordinarily the incising of the peritoneum can be avoided by a little anatomical knowledge. The danger is not so great in children where the bladder is situated high up and is properly an abdominal organ. Complications, such as reported by Dr. Meisenbach, must be looked upon as accidents, and need not necessarily militate against the performance of the operation. Drainage through the penis is not good however, it was practiced in several cases by the speaker, but the abdominal wound had to be opened subsequently.

In 1876 speaker performed his first supra-pubic lithotomy on a child, and removed thirteen uric acid calculi. The peritoneum was accidentally incised, and the child died of septic peritonitis.

In the matter of drainage, speaker agreed with Dr. French that it must be established in every case of stone in the bladder, as that is always the exciting factor of a cystitis, which is more pronounced in the adult. Then, in enlarged prostate, we accomplish the same result which Sir Henry Thompson aimed at; namely, to give the prostate a rest while the bladder was being drained through the supra-pubic opening. This latter operation seems not to be of so great importance in this day as surgeons are proposing to castrate. Speaker had to day examined two cases of lateral hypertrophy of the prostate in patients 55 and 72 years of age respectively. Both desired to hold on to their testicles, although the patient 66 years of age had lost the left one 4 years ago, removal being made necessary on account of a suppurating epididymitis.

The opening in the bladder is usually small and should close very readily if properly treated. Speaker had never seen a fistula following a lithotomy.

In performing a certain operation we are usually guided by the literature on the subject, and that indicates that the supra-pubic operation is gaining in favor very rapid-

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ly. It is performed more generally, because we may explore the interior of the bladder very readily, a condition which is of great importance in ulcers, varicose conditions of the veins and tumors. It has the additional advantage that stones of any size may be removed without difficulty. In the perineal operation this is not possible and often necessitates crushing of the stone before it can be removed, thereby creating an additional source of danger.

The perineal operation is not as simple and devoid of danger as is usually suggested. The statistics, referred to by Dr. French, are those of Dr. B. A. Dudley of Kentucky. He reported 139 cases without a death. Statistics are generally very unreliable and if this operator was working for a record it was a very good time to quit. The very next cases might have been his fatal ones. There is not much danger of wounding the seminal or ejaculatory ducts, however, as that may be very readily avoided by a little anatomical knowledge. Speaker had done the perineal operation in two patients, who subsequently had quite a large progeny. Hemorrhage, too, need be of no concern as it is very readily controlled.

In the crushing operation, speaker had not been able to attain to great dexterity in spite of the apparently perfect instruments. This he attributed to several failures in his first attempts, due to physical difficulties. In one case the stone was encysted and in another it was too large and hard. The operation requires considerable dexterity, a gentle touch, and, as has been said of some other operations, a great deal of experience before it can be done successfully.

Dr. Meisenbach thought that the literature of to-day shows it to be a scientific fact that normal urine—urine which has not been exposed to conditions favoring decomposition—will cause no harm if allowed to drip into the peritoneal cavity. The peritoneum can take care of it without any serious consequences.

He doubted also whether a true inflammation exists in every case of stone in the bladder. We must differentiate between inflammation and hyperemia. Hyperemia is usually present in children where a small calculus has been present a short time.

In the matter of inflating the bladder, speaker preferred liquids, as we can gauge the quantity more accurately. Excessive pressure may be produced with air as well as with water, both media being liable to lead to rupture in an inflamed organ.

Annual Meeting of the St. Louis Microscopical Society.—At the annual meeting of the St. Louis Microscopical Society, the following officers were elected for the ensuing year: President, Dr. H. A. L. Rohlfing; Vice-President, Dr. Edw. Evers; Secretary, Dr. Frank Heitzig.

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ABSTRACTS

MEDICINE.

Study Upon Mercurial Frictions. — Dr. Cathelineau has just undertaken, in the service of Professor Fournier, at the St. Louis Hospital, a whole series of experimental researches, to enable him to determine the manner in which mercurial frictions act upon the organism. It is well known that several hypotheses have been advanced on the subject. According to some the mercury penetrates directly through the skin in a state of extreme subdivision. This theory has been vigorously assailed in recent times. For others the mercury penetrates the organism under the form of soluble absorbable compounds produced by the chemical action of the fatty bodies of the ointment base or the products of secretion of the skin. For others it penetrates under the form of mercurial vapors formed in the hair follicles and sebaceous gland follicles which the inunctions have filled with mercury. For others, finally, the mercury penetrates in the state of vapor by pulmonary inhalation, and this is indeed the best demonstrated fact up to the present time. Every individual subjected to the process lives, perforce, in an atmosphere where the mercury of the ointment continually emits vapors which are given off to the surrounding air, and decisive experiments have shown that it suffices to place an individual in a medium saturated with mercurial vapors in order to find mercury in his secretions, and in order to have it act upon syphilitic manifestations. Studying the emitting power of the various mercurial preparations from the standpoint of mercurial vapors, the author has become convinced that the pomades made with lanoline, vaseline and lard have a vaporizing power much inferior to that of mercurial chalk or of mercurial flannels. Knowing this power of vaporization for Neapolitan ointment, the author has sought the quantity of mercury contained in the urine of patients subjected to inunction. It must be admitted that all the mercury volatilized has not been absorbed by the patient, since we find some in the urine of those about the patient. Furthermore, a portion of the volatilized mercury becomes fixed in the organism; it is eliminated, besides, by the saliva and the bowels. It results that we should find in the urine of patients a quantity of mercury much inferior to the quantity volatilized. Now, it is the opposite of this that the chemical researches demonstrate. The urine of twenty-four hours contains always a quantity of mercury larger than that which ten grams of ointment used in friction would emit in the same period of time. Now only four grams of ointment were employed in the inunctions made. These researches demonstrate, therefore, in the most irrefutable manner that when we employ mercurial inunction the mercury does not penetrate alone by the

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way of the lungs into the economy.—*Jour. of Cutan. and Genito.-Urin. Diseases.*

Parablennorrhagic Cystitis, or Prolonged Blennorhagic Cystitis.—Dr. Bazy has studied in a recent article the late consequences of blenorrhagia. There are cystites which have begun with a symptomatology more or less acute in the course of a blennorrhagia, which are afterward quieted for a longer or shorter interval, have appeared cured, and have then revived from time to time. Now, in these cases, gonococci are no longer found, but staphylococci or the colon bacillus. The gonococcus has played the role of provoking agent. It has disintegrated the epithelial covering and has delivered it over, disarmed, to the action of other saprophytic microbes of the canal, the only ones that we find ordinarily in these cases of cystitis remote from the initial blennorrhagia. It is for this motive that the name parablennorrhagic is more appropriate for them than that of blennorrhagic, to indicate that if they have their origin at first in a preceding blennorrhagia they are not kept up by the characteristic infectious agent of blennorrhagia.

The author has been able to observe such cases one, two, three, and even up to twenty or thirty years after the first blennorrhagia. In some patients there is no interruption between the initial blennorrhagia and these accidents, however long may be the interval which separates them. They have, in point of fact, always felt their bladder; the slightest departure from their regime has been followed by a painful reminder in this region, and has been followed by suffering or, rather, by a burning during the act of urination. In others, on the contrary, the pain has been so fleeting, so light, that it has scarcely attracted their attention, and we have to insist upon the point and cause them to reflect for a time before they remember that such has been the case. In others, finally, there is an absolute void between the long past blennorrhagia and the present cystitis, and it is only by analogy with the preceding factors that one can make this category of cases enter into the same class. It is even, up to a certain point, questionable whether it should be done, since we cannot claim that an individual is refractory to the other causes of infection and to the other causes of cystitis by reason of the fact that he has had blennorrhagia.—*Jour. of Cutan. and Genito.-Urin. Diseases.*

The Use of Peptomangan for Anemia in Pulmonary Tuberculosis.—The New York *Medical Journal* publishes the following interesting article written by Karl Von Ruck, B.S., M D., of Asheville, N. C., Director of the Winyah Sanitarium for Diseases of the Lungs and Throat:

The anemia of tuberculosis differs from some other forms in being, as a rule, the result of the deleterious effects of toxines upon the blood, or upon the blood-making organs.

Simple anemia at times precedes the development of tuberculosis, and becomes a predisposing factor to infection with the specific germs, and in the course of the disease such anemic states may also result from gastro-intestinal complications. These do not come within the limits of this paper. While the toxic form can not always be distinguished because frequently associated with the other, toxines must be recognized, nevertheless, as a chief cause of anemia in all contagious and infectious diseases. In its treatment the indication is, of course, the prevention of the production of toxines within the body, which can only be accomplished by the removal of the pathogenic germs, or by the production of immunity from their toxines.

The destruction of the specific germs of tuberculosis within the living organisms, or immunity from their toxic products, occur naturally in strong and healthy persons who show no predisposition to the acquirement of tuberculosis. If infection occurs in such, their tissues, and especially the blood, are capable of offering successful resistance, and the organism is preserved in its integrity.

In the established disease, the resisting power of the particular patient has evidently been insufficient, either by reason of the organism being overpowered by the excessive quantity of infecting material, or by reason of the minor resistance on the part of the tissues where the specific germs gained entrance. This view is so uniformly accepted, and in the light of pathological investigation as well as of clinical experience it is so well proved, that there is no necessity for me to dwell upon it further, neither is its elucidation contemplated in this paper.

While our direct treatment of this disease with specific germicidal remedies, inaugurated by Professor Koch four years ago, is now still further advanced toward success through the purification of the remedy by Professor Edwin Klebs, and by the experienc eobtained since its introduction, we must, nevertheless, not lose sight of the resisting power of the patient and of its increase; so far as that may be possible, it must be accomplished, if we expect to deal most successfully with the disease. In the application of the specific culture products in pulmonary tuberculosis my observations have amply confirmed this view, and the best results are being obtained in cases where the general strength of the patient is still good, and especially when the blood approaches a normal standard in corpuscles and hemoglobin.

Most tubercular patients show a considerable loss in these respects, even in the early stages, and these losses I have often observed to progress despite a good appetite, and in patients who for the time gained in weight. That the anemia in such cases is of toxic origin is proved by the fact that the losses become balanced under specific treatment, and my records show many instances in which the administration of tuberculin, and more particularly larger doses of antiphthisin (Klebs), showed that a slow regeneration of the blood followed

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their use, while the febrile movement accompanying the resorption of toxines disappeared.

It is therefore quite rational to seek to aid the regeneration of the blood, the more so as in all advanced cases it takes place very slowly if at all; and in addition to proper dietetic and hygienic management one looks naturally to ferruginous remedies for its accomplishment. This has been my endeavor under every method of treatment, but the available preparations have not only failed me in the majority of instances, but they have frequently interfered with the improvement in other respects by disturbing the digestion and assimilation of food. After many more or less indifferent results I came to discard iron in all pharmaceutical forms, and resorted to rectal injections of defibrinated blood, which, although very inconvenient and frequently objectionable to the patient, accomplished my object most satisfactorily, until some twelve months ago, when I rather reluctantly undertook the administration of peptomangan, chiefly because some of my patients positively refused the blood injections, and because of the laudation of the remedy in German medical literature by authorities personally known to me to be reliable.

In its clinical use I found, in the first place, that the remedy was palatable and readily taken by the patients, and from its first use to the present time I have had only two cases in which I was obliged to abandon it. These were cases with tubercular ulceration of the epiglotis, and they complained of more smarting pain and distress than from the swallowing of ordinary liquids and foods, even when the remedy was largely diluted; in all other cases it was well borne by the stomach: in quite a number the appetite improved very early; neither is there evidence of its producing constipation in any case.

It would extend this paper beyond reasonable limits to give the details of the comparative examinations of the blood made from time to time in upward of seventy patients who received this remedy; suffice it to say that the most improved instruments and apparatus were used, and that all sources of error were carefully excluded. The results in the first series of experiments (comparing twelve patients) were as follows:

COMPARATIVE TABLE FOR TWELVE PATIENTS TREATED WITH PEPTOMANGAN SIX WEEKS.

	In six weeks previous the patient had				At beginning of peptomangan.		After six weeks' use of peptomangan.		Under peptomangan the patient had			
	Lost.		Gained.						Lost.		Gained.	
	Number of corpuscles	Hemoglobin. Per ct.	Number of corpuscles.	Hemoglobin Per ct.	Number of corpuscles.	Hemoglobin Per ct.	Number of corpuscles.	Hemoglobin. Per ct.	Number of corpuscles.	Hemoglobin. Per ct	Number of corpuscles.	Hemoglobin. Per ct.
1	.....	...	141,000	4	3,400.000	72	3,740,000	83	.....	....	340,000	11
2	.....	....	88,000	3	2,716,000	58	3,390,000	76	.....	....	674,000	18
3	.....	2	14,000	. ..	3,088,000	74	3,176,000	79	.....	...	78,000	5
4*	740,000	9	.....	....	2,015,000	42	1,792,000	40	223,000	2	.....	....
5	.....	....	166,000	2	3,853.000	85	4,600,000	92	.....	....	747,000	7
6†	301,800	7	.....	....	2 610,000	59	3,543,000	88	.....	....	933,000	29
7‡	.....	....	.....	....	1,507,000	33	3,600,000	69	.....	...	1,793,000	36
8	.....	....	390,000	4	4,389,000	81	4.422,000	92	.....	....	33,000	11
9‖	.....	....	94,000	10	3,700,000	66	4,800,000	97	.....	....	1,100,000	31
10‖	511,000	13	.....	....	2,005,000	49	3,983,000	90	.....	....	1,978,000	41
11↓	.....	....	.....	....	1,547,000	27	3,545,000	73	.....	....	1,992,000	46
12	.....	....	815,000	30	4,002,000	90	4.612,000	93	.....	....	610,000	3

*Patient suffered from advanced pulmonary tuberculosis with occasional colliquative diarrhea, and had lost in corpuscles 740,000 and hemoglobin nine per cent in the four weeks preceding.

†Patient had toxic temperature in a mild degree, and had lost 301,800 corpuscles and seven per cent of hemoglobin in six weeks previous; did not receive any specific treatment.

‡Patient has also received tuberculocidin (Klebs), under which the temperature became normal in the third week; only recently admitted; no previous examination for comparison.

‖Early-stage case; received tuberculocidin (Klebs), 0.01 to 3 cubic centimeters, under which tubercle bacilli disappeared from the sputum and physical signs were no longer demonstrable.

‖Early-stage case; gastric catarrh; stomach was washed every day for the first three weeks, then occasionally.

↓Patient just admitted; a month previous suffered from pulmonary hemorrhage, with acute tubercular pneumonia following; received tuberculocidin (Klebs), 0.005 to 2.4—in all, 21 cubic centimeters; gained eleven pounds in weight.

If we now examine this table, we find that in the six weeks previous to the use of the peptomangan we have ten patients in whom the loss or gain in their blood condition could be compared; seven of these patients gained in all 1,408,000, or an average of 200,000 each, whereas these same patients gained under peptomangan

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3,609,000 corpuscles, or an average of 510,000 for each.

As to hemoglobin, a similar increase is perceptible. In six weeks preceding, of the seven patients, six also gained in hemoglobin in all fifty-six per cent, or an average of nine per cent; but nnder peptomangan these same six patients gained in all eighty-one per cent, and on an average thirteen and a half per cent.

Further, whereas of the ten patients only seven gained in corpuscles and six in hemoglobin in the six weeks preceding, under the peptomangan nine gained in corpuscles and hemoglobin, and no loss occurred except in one, and she lost only a third as much as in the six weeks before. Cases VI and X are particularly to be noticed. In Case X, the patient, having suffered a loss of half a million corpuscles and thirteen per cent of hemoglobin, gained in the six weeks' treatment with peptomangan two million corpuscles and forty one per cent of hemoglobin. It is, however, true that he also received local treatment for his gastric catarrh; but that treatment was applied during three of the previous six weeks without being able to check the rapid loss. In Case VI, the patient, having previously lost 301.800 corpuscles and seven per cent hemoglobin, gained 933,-000 corpuscles and twenty-nine per cent hemoglobin.

When these comparisons were completed, examinations were made at less frequent intervals, and the use of peptomangan was more generally adopted in my in stitution.

Another series of cases was more accurately observed within the last six months, and the results were practically the same as in the table. In all cases the improve ment of the blood condition was highly satisfactory; in quite a number phenomenal. The degeneration, fragmentation, and disappearance of the tubercle bacilli from the patient's sputum, while heretofore also ob served under tuberculin, and more particularly under antiphthisin (Klebs), was certainly more rapid in the cases in which the blood examinations showed rapid improvement—to my way of thinking, a good proof of the germicidal action of the blood, and of the great importance of improving its condition whenever any impairment becomes manifest.

As to the superiority of this particular "iron and manganese" preparation over others, and as to the value of the manganese in the combination, I will not pretend to offer any explanations. I simply wish to record clinical facts, in the belief that all practitioners will gladly welcome any remedy which can so apparently aid in the anemia of tuberculosis, as appears from the preceding table, and in other anemic states, as shown from the reports of Dr. H. P. Loomis and other observers.

Tuberculous Cattle.—A dispatch from Wash ington is to the effect that as soon as the appropriation of $100,000 in the agricultural bill becomes available, the Bureau of Animal Industry of the Agricultural De partment will begin an investigation of the prevalence of tuberculosis among cattle. The investigation will be commenced among herds from which Washington itself gets its supply of milk. Various herds in that section of the country have been inspected and tested from time to time with startling results. A herd ten days ago on a farm in the District was found to have 90 per cent of its animals infected; and a few days before that no fewer than 90 animals in a herd numbering 126 near Richmond, Va., where discovered to be diseased. These are extreme and unusual cases, it is true; but occurring synchronously within a narrow radius, they were enough to rouse the Government to a sense of the danger to which the country is exposed from this source. An experiment performed by one of the scientists attached to the animal industry laboratory about the same time tended in the same direction of alarm. Ascertaining from test experiments which he had been making with the milk supply of the capital that it was tainted with tubercle, though perhaps not tainted sufficiently to be very dangerous to human health, he inoculated a guinea-pig with the milk; and, sure enough, after a few days, when the tubercle bacilli contained in the milk had had time to plant themselves and develop in his system, the rodent exhibited unmistakable tuberculosis. Concurrent circumstances like these, forced on the attention of the Government, produced the belief that it was about time a general investigation of diseased cattle should be made, if the danger to human health so portended would be avoided.

The way in which cattle are diagnosed most easily and most surely for tuberculosis is by the inoculation of them with an infinitesimal quantity of a preparation of which we heard much more a few years ago than we hear now—Koch's tuberculin. Tuberculin is a pretty expensive drug, costing $8 for about a teaspoonful. The Government prepares considerable quantities of it and distributes it free among State boards of health and live-stock commissioners. Inoculated with tuberculin, cattle straightway declare whether they are infected with tubercle or not, by the reaction that follows or fails to follow the inoculation. Now tuberculin has been furnished to twenty-three of the forty-four States of the Union, and the tests which have been returned to the Government from these States, although they have not nearly all been returned yet, show conclusively that the disease is spread among cattle throughout almost the entire Union. In fact, the probabilities are that it will be found that 5 per cent of all the cattle in the United States are suffering more or less with tuberculosis!

That is the alarming state of things of which the Government will have to take account, and for which it will some way or other have to devise a remedy. It cost $1,500,000 to eradicate contagious pleuro-pneumonia from United States herds, and the amount of contagious pneuro pneumonia was not a tithe of the amount of tuberculosis which at present exists. "So many milch kine alone are infected with it," says Dr. Salmon of the Bureau of Animal Industry, "that if they be all killed 'fresh milk will cost as much as cham-

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pagne.'" It would be well for us not to forget that of all our cattle, and especially of all our milk givers, at least 5 in every 100 are infected with tuberculosis; which disease, appearing most commonly as consumption in the human subject, is easily communicable both through meat and through milk. Common prudence would suggest the necessity, therefore, of boiling all milk before it is administered to anybody.—*Public Opinion.*

Iodoform in Tuberculous Phthisis.—A. Foxwell (*Birmingham Medical Review*) has had considerexperience of the value of iodoform in the treatment of tuberculous phthisis during the last eight years, and on the whole he considers it the most satisfactory of all the antiseptic drugs which have been used in tuberculosis. He has examined his out-patient case books for 1886, 1887 and 1888, but, of the many instances in which iodoform was used as the main treatment he could only collect forty-six where the notes were kept with sufficient persistency to make them worthy of record. Of these, twelve were much improved, fifteen improved, eleven remained the same, and eight grew worse; that is, 59 per cent improved and 17 per cent grew worse. Of the twelve who much improved, six had reached the third stage, but only two of these had both lungs attacked, and only one among the fifteen who improved; eleven had reached the third stage, and seven had both lungs involved. Of those who grew worse, five had both lungs attacked, and three of these had reached the third stage. Of the eleven who remained stationary, seven had reached the third stage and five had both lungs diseased. From these statistics it appears that the advanced cases did as well as the early ones. This the author thinks to be due mainly to the favorable nature of the advanced cases, being mostly cases of localized cavitation or those in which considerable fibrosis had occurred. The unfavorable advanced cases doubtless felt themselves too ill to stand the exhaustion of out patient attendance. The usual prescription was one 1-grain pill, to be taken six times a day. The dose never exceeded that amount, and was occasionally less, the average being five grains daily. In three cases only were any symptoms of poisoning detected, and these were merely of a mild gastric nature. The author also tried the drug in conjunction with oil and tonics, and compared both classes of cases with those in which oil and tonics alone were used. The conclusion he arrived at after a three years' trial was that iodoform given by itself gave better results than any other drug or combination of drugs he had tried or seen tried. It soothed the nervous system of erethic subjects; it very greatly lessened cough and expectoration; it powerfully increased nutrition, the patients often becoming quite plump under its continued use; finally, there was as great, if not greater, improvement in the physical signs than the author has seen accomplished by any other mode of treatment, except that of climate and hygine. Foxwell has since used iodoform for the cure of phthisis in some private patients and in some hospital in-patients, and his later experience fully bears out his previous impressions. As regards mode of administration, the author believes it to be always safe to begin with 2 grains t. d. s. If the patient has difficulty in steadily taking this small dose, it is useless to persevere any further with the drug. "Having satisfied yourself," says the author, "by three or four days' treatment that the daily dose of 6 grains can be well borne, order it to be increased by two grains every other day till 30 grains are reached. Keep the patient to this daily dose for at least three months, and at a somewhat lower level (should all signs of activity have have vanished) for three months longer." If the patient does not strongly object, he always advises its continuance for a year. Foxwell has usually limited himself to a maximum dose of 30 grains a day.—*British Medical Journal.*

SURGERY.

Non-Operative Treatment of Hemorrhoids.—Gibbs, who writes on this subject in the *Post-Graduate*, makes no distinction between the two common varieties of piles—the internal and external—because the treatment of either answers for the other. There is a very painful little tumor frequently seen on the verge of the anus, very much the size and color of a huckleberry, consisting of a small thrombus in one of the marginal veins, covered partly with skin and partly with mucous membrane. If let alone, the clot is absorbed and the tumor disappears, or else becomes infected, suppurates, and cures itself spontaneously; but in either case only after, perhaps, a week of suffering. In these cases the proper plan—and few patints will object—is to use a few drops of cocaine, laying open the cavity and pressing out the entire clot, thus curing the trouble and stopping the pain in half an hour or less. If, on the other hand, this little operation is not permissible, there is nothing to do but undertake three or four days' treatment, based on general principles, consisting in cathartics, preferably podophyllin or cascara, rest in bed, and cold or hot applications. Cocaine he has not found always satisfactory, though it does sometimes work to a charm. Among the wet applications, either hot or cold, his preference is for some preparation of witch hazel or the common hospital lead and opium.

Last, and not least, is the time-honored suppository of opium and belladonna, so dear to the hearts of the medical profession. This is the recognized hospital treatment in New York and covers all cases of pain from any cause whatsoever, when the lesion is low down, in reach of the anus, but in severe cases rest in bed with catharsis accomplishes far more in a given time.

More painful still, and more difficult to handle, is that complication of marginal hemorrhoids known as fissure.

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It is most usually found posteriorly in the median line, overlapped by a fold of protruding hemorrhoid. Here, again, comes up the question of operation. For the most part when the writer finds a case of this sort that does not respond to the general treatment just laid down, he strongly advises giving ether, stretching the sphinc ter, cutting the fissure, and removing the hemorrhoids, thus radically curing at once an old chronic disease. Next best is the treatment already mentioned, when enforced as vigorously as possible.

Not infrequently these fissures heal quickly under local applications of nitrate of silver not stronger than 20 grains to 1 ounce, repeated not oftener than once in twenty-four hours; while, on the other hand, the solid stick is very apt to convert a small tear in the mucous membrane of the anus into a chronic, intractable ulcer. The temptation to use morphine in very severe, prolonged pain is great, yet the harm it does in these cases is not to be forgotten. Admitting the truth that constipation is the direct cause of acute symptoms in chronic rectal diseases, we have no doubt in saying that a three or four days' course of morphine will reconcile almost any patient, no matter how timid, to either death or operation, after the first passage over an "intolerable" fissure. Verily, "constipation is the thief of time." A less frequent cause of pain, as a symptom of piles, may be seen when a mass of tumors prolapses and remains outside of the body, swollen, red and perhaps gangrenous. Here the same procrastinating treatment will, in a week, more or less, help to diminish the acute symptoms. To summarize: In order of importance, rest in bed, unloading of the bowels, sensible diet, abstinence from alcohol, and an abiding faith on the part of the medical attendant that subsequent and severe attacks will induce a great sufferer to submit to an operation involving no pain or risk to life, with a guarantee of no more trouble.

The second symptom already spoken of is hemorrhage, usually accompanying the act of defecation, and varying from a few drops to an ounce or more. Most people do not bother with "a little thing like this," simply because it entails no pain.

On the first occurrence of bleeding, many patients are more or less frightened, until they have assured themselves that they have "nothing but piles," and let it run on indefinitely, except in those rare cases when the loss of blood begins to reach the point of exsanguination; but the majority of cases are allowed to continue or stop spontaneously. Hemorrhage, whether profuse or not, can be easily controlled, if the bleeding spots or area can be seen, by careful applications of nitric acid, or by touching with the Paquelin or galvano-cautery. There is no pain unless the skin margin is burned, and one application should be sufficient. Of course, any destruction of healthy mucous membrane does harm, and the cauterization should be superficial and limited to the bleeding-points or areas. Such cases as require etherization and ligation the author has read of, but not seen.

Prolapse of internal hemorrhoids occurs in advanced cases where the tumors are large and flabby. Whether they return to the cavity of the rectum with or without assistance after defecation, this symptom causes but trifling annoyance. It is not till the sphincter becomes somewhat relaxed and allows protrusion at any time, on standing or walking, that any real distress occurs, and this brings us back again to the subject of pain and what to do for it. In these severe cases local treatment is not very promising. Local applications or cauterization, thorough reduction, and laxatives are worth trying, especially if re enforced by a few days' rest in bed. If these fail, there is nothing but operation. Last and worst of all are cases of prolapsed hemorrhoids that refuse to be returned, become gangrenous, inflamed and extremely painful. There is then absolutely nothing to do but rely on the cure and wait for the sloughing to destroy enough tissue to allow retraction and contraction.

The general principles already laid down are to be applied in the many nervous reflexes so common to all rectal diseases: symptoms referred to the bladder, urethra, ovaries, intestinal tract. After successfully quieting one or all of the symptoms of which we have spoken in such detail, there is nothing so useful as a local tonic as cold water applied to the perineum twice a day with a bath sponge; better than any suppository or astringent, used copiously, not inside the rectum, but outside of it. We have omitted all mention of carbolic-acid injections, for the reason that this method of treatment is in its true sense a surgical operation devised for the purpose of doing away with venous tumors, and liable to all the dangers and complications of cutting with knife and scissors, such as great pain, infection, abscess, sloughing to any extent, and secondary hemorrhage. Were we discussing operative measures it would have to take its chance with the ligature, the clamp and the cautery. Summing up in a few words, the non-operative treatment of hemorrhoids comes down to general medication of some predisposing cause and local applications to relieve individual symptoms.—*Therapeutic Gazette.*

NOTES AND ITEMS

The Occurrence of the Bacillus Diphtheria Outside of the Body.— Wright and Emerson have made a study of the dust upon the floor of the diphtheria pavilion of the Boston City Hospital and upon the clothing and person of the attendants, to determine if diphtheria bacilli could be found. The diphtheria pavilion is isolated, and divided into large and small apartments. It contains seventy beds. The general sanitary condition is good. The results were as follows:

Of four cultures from floor sweepings from the brush and the cloths used in dusting, but one (from the brush)

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was positive as regards diphtheria bacilli. Other bacteria were also present. Of four examinations of the dust and other matter adherent to the shoes of the attendants, three showed the presence of a small number of diphtheria bacilli, together with other bacteria. Cultures were made from the hair of the attendants in four cases, with positive results in one. Examination of the margins of the dresses of the attendants, of the bedclothing, of the shirts of the patients, and of the fingernails of the attendants, were all negative as regards diphtheria bacilli, as was also an examination of the air of the pavilion. In two of the five examinations in which bacilli were found the degree of virulence was slight.—*Med. News.*

The Berlin Sewage Farms.—The city of Berlin is absolutely cholera proof, writes Mr. Poultney, in the *Cosmopolitan*. Besides that, she disposes of all the sewage within her borders at a profit of two per cent. The city of Berlin, nearly twenty years ago, purchased some thousands of acres of flat sand wastes adjacent to her boundaries. With these she began the experiment of utilizing sewage. The city was divided into districts. In each district the sewage flows into an immense cesspool. Thence it is removed by powerful pumping machinery to the fields of sand wastes, and spread upon them.

There are no "barnacle politicians" in Berlin to hang on and ruin the workings of the municipal government, Mr. Bigelow says. The administration of the sewage-farms is in the hands of citizens of the highest respectability, and under their management the result has grown to be an object lesson to all the cities of the earth. The pumps work night and day. The lands irrigated by the sewage-ditches are cultivated in grain and vegetables. The product is the finest by far that appears in the Berlin markets, and is the most in demand. Land about Berlin in its natural state, before the sewage irrigation was applied to it, was worth $182 per acre. As soon as it is put under the operation of the gigantic pumping works, however, immediately raises it in value to $400.

A Lover and His Lass.

AFTER READING THE MEDICAL PRESS.

HE:

Take, oh! take those lips away!
  Not but what I want to kiss them,
Not but what, believe me, pray,
  I most certainly shall miss them.
Heretofore, you know, I've joyed
  In our frequent lip communion;
Never yet have I been cloyed
  With the sweets of labial union;
    'Tis on other grounds, I say,
    "Take, oh! take those lips away!"

My decision is no whim,
  Due, my love, to fit of vapors,
'Tis the consequence most grim
  Of perusing doctors' papers;
For these journals now declare,
  With malign persistence, Beryl,
That each kiss in which we share
  Reeks (excuse the work) with peril.
    That is why I'm forced to say,
    "Take, oh! take those lips away!"

SHE:

Try not thus to me dissuade,
  For in vain is your endeavor,
What, shall I shrink back afraid,
  When my Edwin dares? No never!
Darling, you know well our case,
  Love has bound us in one tether,
So, if there be risks to face,
  We will face them both together;
    As you love me, then, don't say,
    "Take, oh! take those lips away!"

HE AND SHE:

We will never be coerced
  By the bullying bacillus,
Doctors, though they say their worst,
  With dismay shall never fill us,
Let us, therefore, both of us,
  Their last raven-croak dismissing,
Show that thus—and thus—and thus!
  We still mean to go on kissing.
    Neither of us means to say,
    "Take, oh! take those lips away!"

—*London Truth.*

National Diphtheria Commission.—Prompted thereto, doubtless, by the suggestion and arguments of the *Journal*, Representative Goldzier, of Illinois, has prepared and will endeavor to secure the prompt adoption of the following preamble and joint resolution for the creation of a National Commission for the investigation of the antitoxine treatment of diphtheria:

WHEREAS, The following propositions are believed to be true, to wit: That the disease known as diphtheria is one of the most destructive of human life in this country—ranking in this respect only after consumption, pneumonia and the diarrheal diseases; that it is steadily increasing in prevalence and in the number of its victims; that its mortality, under the usual methods of treatment, is equal to, or greater than, that of unmodified smallpox; that recent scientific developments in Europe seem to have evolved a method of treatment by which the mortality of the disease is reduced more than one-half, with promise of still better results; and that the details of this new method and the claims made for it should be thoroughly investigated and authoritatively reported upon for the information of the medical profession in the interests of the public health therefore, be it

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Resolved, By the House of Representatives, the Senate concurring, That the Secretary of the Treasury, the Secretary of War and the Secretary of the navy be, and they are hereby, authorized and directed to create a commission for the investigation of the antitoxine treatment of diphtheria, said commission to be composed of not more than three officers of the medical services of each of the respective Departments, which officers shall be selected for their special qualifications for such investigation and shall serve without extra pay or emolument; that said commission shall immediately proceed to the proper localities for the necessary study and research and shall prepare, with as much promptness as is consistent with thoroughness, a report embodying the results of their investigation, which report, upon the joint approval of the Surgeons General of the Army and Navy, and of the Supervising Surgeon General of the Marine-Hospital Service, shall be published in a special edition of the Abstract of Sanitary Reports now published by the Treasury Department in accordance with the Act of Congress of Feb. 15, 1893.—*Jour. Am. Med. Ass'n.*

DR. W. SCOTT MARSHALL, 5625 Jackson Avenue, Chicago, manufacteres a buggy case which can instantly be changed to a saddle bag. See advertisement. Write for special prices.

A SUBSTITUTE FOR MORPHIA.—"Febrinol" given in ten-grain doses is a reliable substitute for Morphia, and is indicated in all nervous and painful conditions where Morphine is given. Febrinol has the advantage of relieving pain quickly without any of the evil effects of Morphia. Febrinol is also a reliable hypnotic; ten grains administered at bed time rarely fails to produce sound refreshing sleep.—*The Alkaloidal Clinic.*

A postal to Fuller & Fuller Co., Chicago, will bring you samples and literature by return mail.

SEND twenty-two cents in stamps to McArthur Hypophosphite Co., Boston, for "McArthur Pocket Diary, 1895."

"Handiest and most useful little book for the physician that we have seen. Contains doses of drugs including new remedies, a list of disinfectants and how to use them, antidotes for poisons, methods of treating emergencies, an obstetric ready reckoner and other valuable information.—*Brooklyn Medical Journal.*

HE CARRIED IT IN HIS POCKET.—When the editors of our medical journals choose a certain remedy one may rest assured there is good reason for doing so; because the editor has an opportunity through his exchanges of knowing more about these matters than can hardly be the case with others. The editor of the *Southern Medical Record*, Dr. D. H. Howell, has been a sufferer for months with the most intense pain in his eyes. After trying a number of "old reliables" he betook himself to Antikamnia. He says: "I was relieved in less than two hours. I now carry it in my pocket all the time."

DAVID BOYLE, Curator, Canadian Institute, Archaological Museum, writing to Manager, Dominion Dyewood and Chemical Co., says: "Having used a dozen of your Piperazine-Bayer Tablets during my illness (calculus in the bladder) I was conscious of feeling consinerable relief after each dose, and I have sufficient faith in the drug to believe that had I used it at an earlier stage of my trouble, the operation which subsequently became inevitable might have been avoided. This testimony is wholly unsolicited."

G. WILEY BROOME, M.D., will give a Four Weeks' Course in Scientific, Clinical and Operative Surgery at the Woman's Hospital, St. Louis, to a limited number of practitioners and advanced students commencing Tuesday, January 8, and closing February 15, 1895.

CONSIDERABLE interest is being evinced by physicians regarding the tonic stimulant action of Kola, and it is coming to be largely used in cases of nervous exhaustion, as it combines the invigorating properties of caffeine, with the stimulating effects of theobromine and kolanin, which latter peculiar principle is claimed by some investigators to be superior to cocaine as a stimulant, without the enslaving properties of the latter alkaloid. This peculiar principle is found more abundantly in the fresh (undried) Kola nuts, and taking advantage of the knowledge of this fact, Messrs. Frederick Stearns & Company, of Detroit, Mich., have been the first to place on the market a Wine of Kola, for which they have coined the fanciful title of "Kolavin" to distinguish their product from similar preparations, which in time will undoubtedly appear. "Kolavin" is a delicious aromatic tonic wine, each dose (a tablespoonful) of which contains 30 grains of the fresh (undried) Kola nuts. It is a prompt and active stimulant, and is useful in all cases where such a stimulant is needed. Samples of "Kolavin" may be obtained by addressing the manufacturers, Frederick Stearns & Company, Detroit, Mich., who are headquarters for Kola nuts in this country, having introduced the drug to the medical profession in 1881, and being the sole importers of the fresh (undried) nuts from Africa. Their Scientific Department has recently issued an elaborate monograph on Kola profusely illustrated, which is worthy of a careful perusal and will be sent to any physician who will apply for a copy.

GEO. W. HARDER, M.D., Troy, N. Y., in his paper, "Diagnosis and Local Treatment of Chronic Ulcers of the Leg," appearing in the *Courier of Medicine*, regarding "Sennine" says:

* * * "I cleansed the sore with simple soap and water, filled the excavations with 'Sennine,' a product of Boracic Acid and Phenol, covered with dry lint, having raised the limb to the horizontal position. * * *

"This dressing should be applied every third day, and I remark here, there are very few of ulcers of this class which I have mentioned but which will be at least very materially benefited in a very short space of time by this method of treatment; in fact, since I have adopted this apparently small proceedure and made the patient persist in this, I have been very eminently successful. I have used Iodoform, Aristol, Europhen, Carbolic Acid, Bichloride of Mercury, etc., but must say, during the past year since confining myself to 'Sennine' as a local remedy I have been able to cure at least a dozen stubborn ulcers which resisted all previous efforts for at least a year."

A GREAT MANY visiting lists are published every year. They are very useful and convenient, and THE MEDICAL REVIEW Visiting List, Perpetual (J. H. Chambers & Co., Publishers, St. Louis Mo.), is specially a good one, one of the best published. It not only contains the weekly case list, memoranda, etc., but also much valuable information, such as the methods of preparing disinfectants, chemical examination of urine, poisons and their antidotes, table of doses, etc., etc. It is most convenient in size, of little weight, only four ozs., with a substantial flexible cover.—*Charlotte Medical Journal.*

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Average Weekly Issue, 10,000 Average Monthly for the Year, 43,333

MEDICAL REVIEW.

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ORIGINAL ARTICLES

Traumatic Lesions of Cranium and Brain.—With Report of Clinical Cases.

BY GEO. N LOWE, A M., M D.,

Member Republican Valley Medical Association; The State Line Medical Association; The Kansas State Medical Association; The Mississippi Valley Medical Association; The Pan-American Medical Congress.

Read before the Twentieth Annual Meeting of the Mississippi Valley Medical Association, held at Hot Springs, Ark., November 20, 21, 22 and 23, 1894.

Within the last decade, the advancement made in the technique of cranial and brain surgery, has been exceedingly great; and what seemed almost impossible to many surgeons ten years ago, is possible to day.

In cranial surgery, as well as thoracic, abdominal and operations on the extremities, one of the chief elements in the technique leading to success, is attained by the strict adherence to that sheet-anchor cleanliness, sterilization and asepsis throughout the entire field of operation, and the toilet of the after treatment. This technique combined with other leading techniques of surgical art, such as lines of precision, throughout the entire domaines of the cranial vault and viscera linked by topographic cerebral localization; and, the physio pathological semiology being fully comprehended; with the skilled dexterity in selecting and applying the instruments, to the region or regions injured, has led to brilliant achievements and successes, which have revolutionized brain surgery.

During the last decade, the literature and clinics have been replete, with advanced teachings and successful methods which have greatly illuminated the mystic paths to obscure recesses and vital points, which will enable the surgeon to utilize his researches and attain greater achievements and success, than ever before attained in the field of brain surgery.

Although it was formerly considered that the skull and brain was a hazardous field for mechanical procedures, for the reparative restoration of injuries committed by violence; yet, it has been clearly demonstrated by clinical experience that this field is no less accessible than the thorax or abdomen.

Referring to such reliable, eminent and skilled surgeons as N. Senn, J. W. Wyeth, L. C. Gray, Bernays, Pritchard, Dalton, Prewitt, Wyman, Mudd, Pilcher, Lanphear, Laplace, Peck, Bland, Sutton, and many others of equal eminence, who have displayed their skill in the successful techniques in this special field of operation.

Traumatic lesions of the skull and brain are not an unfrequent occurrence, various and complex, and the busy physician, although he may live in a country village, is frequently called to attend some form of traumatic lesions of the head, some of which are of great severity, and having to be treated under adverse circumstances, such as fractures of the skull, which are naturally divided by anatomical peculiarities and pathological results into two classes, viz., those of the vault, and those of the base.

A fracture of the vault, however, very often co exists with one of the base, and in fact some writers take the extreme view, that this is always the case. Fractures of either class may be incised, fissured, punctured, depressed or comminuted. Those of the vault may involve the external table alone with crushing of the diploe, or the internal table may be comminuted and depressed without any apparent injury of the external table, or the fragments may be elevated above the level of the sound bone. Finally, fractures of either class may be simple, that is without any wound of the soft parts communicating with the fracture, or they may be compound, that is, with a lesion of the soft parts leading down to the injured bone.

Let it be remembered, that almost always, whenever there is any great injury committed to the cranial vault, there is at the same time more or less injury committed to the intracranial viscera. Such as concussions, compressions, contusions and lacerations of the brain with ruptures of the great venous sinuses and blood vessels, and occasionally the complexity in the same case is so formidable that it taxes the skill of the most skilled and dexterous surgeon. Again, let it be borne in mind, that it is not exceedingly unfrequent where persons who have fallen from a height or who have been thrown from a vehicle, while horses are running at full speed, or thrown from a train running at greater rapid-

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ity, or in a collision or precipitated wreck, that there are frequently great injury and destruction committed to the intracranial contents without any manifestations of fracture of the cranium. (Right here I wish to say in justice to my colleagues in medicine and surgery that I am sorry that time will not permit me here to compile the reports of successful and unsuccessful operations upon the skull and brain, giving due credit to each operator).

Almost every case of trauma of the head is an emergency case, and there is no time to utilize a routine preparatory arrangement prior to surgical procedures; and if the physician called is not equipped for the emergency he will soon find himself in a sea of deep water, or a dilemma. As to the best and most convenient aseptical course to persue preparatory to an emergent operation, I have adopted the following method in my practice: If on my arrival I find that the injury is great and threatning to life, I first give my patient hypodermically, strychnia sulphas, grs. $^1/_{30}$; nitro-glycerine, gr. $^1/_{100}$; followed by hypodermics of brandy to support heart action, and stimulate the vital forces. Then I shave the entire head close, scrub the head thoroughly with warm sterilized water and soap, then cleanse with sterilized water, alcohol and ether sulphuric. As to the position of the patient during operation upon the head and brain, for convenience of operation, and to lessen the liabilities to hemorrhage, I usually place the patient, body and head in a semi-recumbent posture; or at least, have the head and shoulders well elevated during the operation.

In penetrating wounds of the skull and brain, by bul lets or other foreign substances, I deem it best to do as little probing as possible in locating the foreign body, as it increases shock, excites hemorrhage and breaks down brain tissue. The probe should always be purely aseptic; if metallic it should be armed with a smooth, small round tip and perfectly flexible, and passed with great skill and almost no force, mainly letting it gravitate its own way. If the missile is found to be located at a point where it may be removed without increasing the danger to the life of the patient, remove it; if not, let it rest in its present locality. Cleanse out the tract thoroughly with warm sterilized water. If found lodged against the skull on the opposite side of entrance I believe it advisable to trephine and remove it In depressed and comminuted fractures of the cranium I deem it advisable in the greatest majority, if not in all cases, to trephine, elevate, and remove all frag ments and spiculæ of bone from the entire field of operation. For the present and future safety of the pa tient I much prefer the trephine and rongeur nipping forceps and elevators as instruments to accomplish this work with, instead of the chisel and mallet. Although there are certain isolated cases in which the chisel and mallet may be used to play a part of the role of instrumentation to great advantage. As to the anesthetic used in this class of operations, I am adherent to the C E. A. combination. As to the soft tissue flap turned down I almost invariably make the crescentic or horseshoe, paying strict attention to turning down the periosteum attached to the flap as much as possible.

Throughout the entire course of the operation, using the greatest percision and gentility, to parts dealt with, with as much rapidity as possible, cautiously avoiding, not to disturb the parts uninjured; excessive handling, or disturbing of parts, are jeopardizing to the life of the patient. Before closing the cavity, see that all particles of blood clot, or foreign substances have been removed; cleansing the cavity thoroughly with warm, sterilized water at a temperature of not below 98.5° F., and not above 100° F.; seeing that every part of tissue is placed in as normal position as possible, and all access of fluids is removed. If the surgical repairs have been extensive and injuries have been great, I establish drainage, if not, I close up the wound with flap in its normal position to adjacent parts if possible *secundum artem*.

Where there are injuries of any considerable severity to the inner table, as comminuted or depressed fractures, or destructive lesions committed to the intracranial viscera, such as contusions, lacerations or rupturing of blood vessels and venous sinuses, to that extent that the patient's life is in question or jeopardy; although there may be no manifestations of injury to the external table or soft tissues. However, as soon as the injury can be localized, I believe it justifiable and good surgery to operate immediately, without delay, because every moment of time lost still increases the danger to the patient's life. Cases of this class generally demand a larger field for operation, therefore I believe the chisel, or better the steel drill, as advised by Drs. Hartly and Parker, of New York, are the best instruments for operation upon the skull at the point of election. It would be advisable in all cases, that the incision through the soft parts and bone, should be square or U-shaped; one side of the soft tissues and bone of the square or base of the U-shape should not be divided but simply broke away square across at the base of the incision. This method preserves the bone and periosteum for repairment and leaves the soft tissue and periosteum attached to the bony flap elevated.

This may be done neatly and scientifically. Thus, after the damaged area has been located, the head being prepared in the usual way, the square or U-flap is elected. With a sharp scalpel make an incision down through the soft tissue and periosteum around the side and upper border of the damaged area, leaving an undivided base at the bottom, commencing at one point of the base and ending at the other. Retract the soft tissue and periosteum of the flap sufficient to follow the line of incisien with the chisel, or better, the drill, by gentle taps of the mallet, to run a groove, commencing at one corner of the base and ending at the other. The remainder of the groove through the bone can be cut with the drill in hand with great rapidity, being careful not to damage the dura. After the cutting is completed an assistant inserts two thin elevating chisels under the flaps at each corner of the base. The operator inserts

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a third chisel at the top of the flap to be elevated. Then they both operate gently together, at the same time, with an up and down motion which soon frees the dura and breaks the bone at the base. The soft tissues form a hinge for the bony flap. This leaves a nice open field to complete the reparative operation. After the reparative operation is completed the field of operation being thoroughly cleansed with warm sterilized water, all superfluities of fluid being removed, then place the flap back in true position, suture and secure by three or four long silver pins. The pin enters the border of soft tissue on one side of the wound, pasess over the bony flap through the soft tissue and let it come out in the soft tissue of the opposite side, curving with the shape of bone. This keeps the parts in position. Then dust the entire field with iodoform or boracic acid, or better, sennine. Then cover the entire field with a number of thicknesses of carbolized gauze and borated or carbolized cotton. Then a layer of oiled silk; then secure by adhesive strips; and lastly, bandage securely to support the dressing to keep it in position. If I do not see any specific cause I never disturb the dressing for two weeks. At or about this period, if the case has progressed at all favorable, I expect to find the parts re united. I now remove the stitches leaving the silver pins intact for two or three weeks longer and redress antiseptically. I long ago learned, in all injuries committed to the tissues of the body, to make the sur gical repairs with great dexterity and precision, seeing that every organ or piece of an organ, left intact, is in its normal position as near as possible, and that all for eign substances, blood clots, superfluities of fluids are removed before closing up the cavity.

Be sure that the parts approximated are in their true relation to each other, and retained so by sutures, ad hesive strips, antiseptic dressings and bandages. If all things are done well and properly by the surgeon, he may expect his cases—at least the greatest majority of them—to get along well without much much further disturbances to his dressings. Now give Nature a chance, assisting her to perform the rest of the work by supporting the vital forces by giving the parts as well as the patient quietude and rest, administering reconstructive medicaments, and in preference to all the rest, plenty of nutritious food. See that your patient's appetite is inviting and that there is an assimilation of the food taken. By especial attention to the organs of excretion and secretion see that they perform their proper functions accordingly, paying the strictest attentions to the function of every organ of the body, that they act in due accordance to the physiological and pathological laws of Nature. If you can accomplish this end Nature will soon complete the work of restoration and restore your patient to health. It is not advisable, nor is it good surgery or scientific, to be frequently disturbing the dressings and wound when once closed. In so doing, you are continually exposing your work and wound to sudden excitation and atmospherical changes. Opening up your field of labor for the entrance of microbes and bacteria and causing general functional disturbances, will retard reparative processes which will lead to abscesses, and if not resulting in a termination of life of your patient, recovery will be tardy.

Natural physical law plays her role in governing abscesses. Therefore any disturbances whatever, physically, mentally or mechanically is a great hindrance to repair of tissue. I therefore make it an invariable rule to give my patients rest, quietude of mind and body, with strict adherence to antiseptic measures, in compliance to the great physiological and pathological laws of Nature. In so doing dame Nature will accomplish the rest. I will now, therefore, report four cases, selected from my case book, which came under my observation for surgical repairs and treatment, as a fair sample of some of my cranial and brain cases:

Case I.—On May 20, 1883, at 9:30 A.M., I was called in haste to see Henry Z., German, aged 26, height 5 feet 8 inches, weight about 180 pounds, well developed, of great muscular power, who had been kicked by a vicious horse on the right side of the head causing a depressed comminuted fracture of the right parietal bone at the junction of the temporal bone. Also a contused lacerated wound of all the soft tissues along the entire ramus of the left inferior maxillary. He had bled quite freely and considerable of blood was discharging from right ear. He was comatose, breathing feebly and sterturous; paresis of left arm lower extremities rigid, cold and clammy. Death was imminently threatening. It would at least require three or four hours to procure the necessary skilled assistance. Under the pending circumstances I was compelled mainly to rely on my own resources. Fortunately, the lady of the house had on tap a large reservoir of hot water. There were six or seven neighbor men, of good judgment, who proposed to give me all the assistance possible. I immediately placed my patient on a long narrow kitchen table, selected my assistants and placed them in position, with full instructions to obey every injunction with dispatch.

As usual in my practice, I first gave my patient strych. sulph., gr. $^1/_{30}$, nitro-glycerine, gr. $^1/_{100}$, and brandy hypodermatically; cleansed and shaved the head close; recleansed the head with alcohol and ether; then turned down a crescentic flap, trephinized and elevated, and removed the comminuted bone and spiculæ, leaving a hyatus two inches long and one and one half inches wide in the parietal in line with the junction of the temporal bone. There was no laceration of the dura, but it bulged up and pressed outward blocking up the hyatus, which was indicative of subdural bleeding. I immediately caught up the dura with a needle armed with a silk ligature, and made an incision in line with about a one-fourth inch beneath the upper and lateral bony walls of the hyatus. Turned out about two ounces of fluid and clotted blood. This blood was from a branch of the internal meningeal artery which had been ruptured and was yet bleeding. I immediately seized the bleeding vessel with a hemostatic forceps and se-

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cured it with a No. 1 catgut ligature. As there was no further bleeding in this region, I then cleansed cavity thoroughly with sterilized water, temperature at 100° F., closed dura with a No. 1 catgut suture, external flap with a No. 2 silk suture and dressed in the usual antiseptic manner.

I then cleansed and closed the wound of the inferior maxillary antiseptically, supported the soft tissues with sutures and adhesive strips. The right ear, continuing to bleed internally, I cleansed out with warm sterilized water with an aural syringe, which checked the bleeding to a considerable extent. Yet there was some oozing of blood from right ear for 4 days, it then subsided. His breathing and heart action had greatly improved. We now hastily removed all soiled garments and redressed him. The shock was severe. He was immediately placed in bed, hot bottles and bricks applied. Hypodermics of brandy were given and nitroglycerine $^1/_{60}$ of a grain added. Bathed with a twenty-four per cent solution of alcohol, wrapped him well with woolen blankets which tided over the shock. His jaws remained fixed except when artificially changed, deglutition impossible for a period of five days. Fed him brandy, milk and oatmeal gruel, per rectum, which acted well as a support and brought about an alvine evacuation in forty-eight hours, which continued at different intervals. Catheterized him every eight hours for four days, then the urine passed, at different intervals, per vias naturales.

At 6 P.M., patient's condition much improved; temperature, 99°; respiration, 18; pulse 70.

May 29, 7:30 A.M., respiration, 19; pulse, 70; temperature, 100°. General condition improving.

May 30, 8:30 A.M., respiration, 19; pulse, 71; temperature, 100.4°. Evening condition remaining about the same.

May 31, 9 A.M., pulse, 72; respiration, 19; temperature, 100.5°. Remaining the same during the day.

June 1, condition unchanged.

June 2, temperature, 100; pulse, 70; respiration, 18. Semi comatose. Some slight movements in toes. His condition continued to improve uninterruptedly and I discharged him on the thirty-sixth day.

On the eighth day after I discharged him, at noon, he was seized with a severe pain in the region of the wound which gradually increased up till 8 P.M. At this time he became unconscious. I was called in haste. I found his temperature 102°, pulse 90, respiration 20. There was a small elevation of the soft parts in the center of the original wound and fluctuating. I operated and obtained a hypodermic of pus. I cleansed and prepared the field antiseptically with carbolized water, and incised the tumor; removed about two drachms of pus; cleansed cavity thoroughly with warm sterilized water; dried out, closed and dressed the cavity in the usual manner. Gave hypodermatically morph. sulph, gr. $^1/_8$, which gave him a good night's rest. He awoke next morning conscious. Temperature normal.

From this on he improved rapidly and was discharged on the sixteenth day and had no further trouble. I alleged this abscess to the ligature applied to the vessel, or else the suture in the dura.

CASE II.—On December 1, 1891, at 3:30 P.M., I was called to see John C., Scandinavian, aged 52, medium in statue, weight about 150 pounds, who had been struck on the apex of the head at the junction of the parietal bones, anterior to the obelion, with an iron maul, which came off the handle while a hired hand was driving down a post. The wounded man fell; the hired hand thought him dead until he carried him in the house. On my arrival I found that the maul had cut all the soft tissues down to the bone for two inches in length, and a depressed fracture one and one-half inch in length in line with the saggital suture. As the patient's condition was good under the circumstances—believing the depression of bone was where it would be likely to do him no great harm subsequently, being between the two hemispheres of the brain—I decided not to elevate the bone, unless I saw some exciting cause to do so. He could articulate and swallow; vision reasonable, no paresis of extremities or other regions of the body. Yet he was suffering severely.

I gave him morph. sulph., gr. $^1/_2$; strychnia sulph., gr. $^1/_{60}$; brandy hypodermatically; shaved head, and cleansed head and wound antiseptically; dressed wound in the usual manner. He made a rapid and uneventful recovery. There has been no bad results from wound up to date.

CASE III.—On September 14, 1891, at 4:30 P.M., I was called to see Miss Ettie B, aged 5½, who was in a comatose state. On my arrival I elicited the following history: Five days previous the child had fallen from a high chair on the floor. The head struck the floor on the left parietal eminence. The child was unconscious for a few minutes; then turning pale as death, vomiting and sweating. Came to consciousness, crying for an hour or so, then went to sleep and slept for three hours or more. After awakening, the child seemed, to the parents, all right, and had no unfavorable symptoms up to the fifth day. Then complained of headache and was quite stupid. This gradually increased until the sixth day at 2:30 P.M., when she was seized with a convulsion which lasted for about fifteen minutes. After the convulsion subsided she became conscious, with some paresis of right leg and arm. Her breathing was stertorous; pulse, 60; temperature, 103.5°; respiration, 16. On palpation I could recognize no fracture of the seat of the lesion. The seminology of the case pointed to intracranial disturbances of grave severity.

I immediately prepared my patient for operation in the usual manner. After the administration of strych. sulph., gr. $^1/_{120}$; nitro-glycerine, gr. $^1/_{200}$; and brandy hypodermically. The head being antiseptically prepared, with a sharp scalpel I made an everted U-flap through the soft tissue and periosteum over the region of the parietal eminence. Then with a thin chisel cut through the skull in line of incision to base of the U-incision. Then elevated the bone-flap breaking it

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square across at the base, turned it over, hanging hinge-like by soft tissue. In this flap of bone the inner table was fractured and depressed which I removed. The dura was greatly congested in the region of the fracture. I incised dura and found blood clots, about two drachms. I then cleansed out wound with warm sterilized water removing all superficial fluids; closed dura with a No. 1 silk suture; replaced flap in position, secured with silk suture and silver pins. Then finished the toilet and dressed in the usual antiseptic way. The child's condi tion soon improved and she steadily made a good recovery.

CASE IV.—October 31, 1892, at 4 P.M., I was called in great haste to see Miss Lillie S., American, aged 20, medium stature, rather slender, weight about 115 pounds. She had been thrown from a cart while a vicious horse was running away at his utmost speed; the wheel struck a mound of earth, the force of the collision throwing her a distance of about 30 feet, falling upon her left shoulder and head, producing almost complete dislocation of the cervical vertebra near disc, and concussion of the brain, also a dislocation (sub glenoid) of the left shoulder joint. Her head was turned obliquely to the right, and tilted over toward the right shoulder, seemingly fixed; countenance cadaverous; eyelids closed; on elevating the lids the eyeball was turned, with pupil directly upward, and mydriatic; extremities cold and clammy, with complete paresis of the left side; on the right side there were violent clonic spasms of the extremities at different intervals, varying from 20 to 30 minutes, but sometimes the intervals were 6 hours, they would continue from 5 to 10 minutes, but diminishing in severity and at longer intervals each day as long as she survived. Radial and dorsalis-pedis not perceptible; external carotid pulse beat very feeble; heart at apex very feeble and irregular—40 to 50 per minute; respiration very feeble and stertorous—15 to 17 per minute. Some involuntary discharge of feces and urine; jaws fixed; deglutition impossible.

My first thought was that surgical interference would be entirely useless; however, I felt it a duty to do all in my power for the young lady. As usual, I gave her strychnia sulph., gr. $^1/_{50}$; nitroglycerine, gr. $^1/_{100}$; and brandy, hypodermically; the patient being placed in a dorso recumbent position, and requested the by-standers to hold her in position while I reduced the dislocated neck, which I accomplished with considerable difficulty; this made a decided improvement in her heart-beat and respiration. I then reduced the dislocated shoulder-joint; this improved conditions to some extent; I then applied hot bottles and bricks, and used hydro-alcoholic baths; wrapped her in warm blankets to restore normal heat; gave restoratives to resuscitate her vital forces, and watched expectantly the results for 5 hours. The semiology of the case indicated rupture of the blood-vessels in the region of the pons. I called Dr. F. M. Daily, of Beloit, Kan., in consultation, and he confirmed my diagnosis. Taking into consideration the semiology and pathological conditions in the case, we did not deem it advisable to trephinize, but to treat the case expectantly. She remained in a comatose condition for 7 days, and then expired.

There was no rise in temperature until the third day.

November 3, temperature, 102.5; respiration, 20; pulse, 100.

November 4, temperature, 103; respiration, 21; pulse, 102.

November 5, temperature, 103.5; respiration, 21; pulse, 100.

November 6, morning temperature, 101.5; evening temperature, 103; respiration, 20; pulse, 98.

November 7, morning temperature, 102.5; evening temperature, 104. Expired at 6.30

I regretted that I did not open the skull and ascertain if there could be any repairment made surgically, yet the outlook was most discouraging and seemingly hopeless.

Inauguration of the Electric Car Ambulance Service.

Remarks of Dr. Geo. Homan, Health Commissioner, at the Dinner Thursday Evening December 27, 1894.

MR. TOASTMASTER AND GENTLEMEN.—Every step forward, be it great or small, must be counted in the life of a city in truly reckoning from time to time the progress it is making toward better things. And better things are those which show in themselves a real gain over the past whether in mind, heart, or soul, in science, intellect or work, in enlightened skill or humane achievment.

The occasion which brings this company together tonight is one that may, not unfairly, be held to partake of this character, small though its particular subject may be, and far distant from the personal sphere and daily life of many of those now present here.

The step forward which we mark this evening is in the line of more considerate treatment and more humane handling of sick and wounded unfortunates; and, if the worth of the civilization of to-day shall be measured in this wise and by such a standard, who, knowing the truth, will dare deny that our shortcomings are many and opportunities for improvement correspondingly great? Nor does it avail to extenuate our delinquencies in this regard by pleading that others have done no better.

St. Louis, as the metropolis of the Mississippi Valley, should be a city set on a hill in all intelligent effort, conspicuous for excellence in every domain, an exemplar and a shining light to all the world.

The origin in me of the idea whose embodiment you have seen to-night was the use of street cars and railways for U. S. mail purposes, this application having been realized through the intelligence and zeal of our then postmaster, Mr. Harlow; and, being quite familiar with the methods and equipment of the local health de

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partment, the thought of a car ambulance arose in my mind. And the same thought must have been suggested to other minds also that had been bent to the question, as the time was ripe for changes, and I take pleasure in saying that the first person who mentioned his ideas to me on this subject was Dr. Albert Merrell, who is with us to-night.

The matter having been fully considered and plans outlined, and after a cordial endorsement of the subject by the Board of Health and the daily press, on June 22, 1894, Mr. Scullin gave the order to the St. Louis Car Company to build a car for the special use of the Health Department in conveying to hospital the ill or injured members of this community whose necessities compelled them to become a public charge. The lines of road operated by Mr. Scullin's Company touch, or very nearly reach, all the principal institutions provided for pub lic relief, and the initiative was thus taken by him in what, to my best knowledge, was an entirely novel enterprise.

Nothing was spared by him in time, care or means to furnish the most perfect appliance in every respect, and if there is any fault to be found the blame lies with me, not him. The builders of the vehicle also took infinite pain, to produce a perfect specimen of its kind, and many valuable suggestions as to construction and detail were made by Mr. Kling of the company just mentioned. I believe that this change of method will prove of much value in the prevention of needless suffering by patients in transit, and in the oppertunities presented for the saving of limb and life, that no more thought of a return to the old way will be entertained than the business world would think of abandoning steam and electricity for horse flesh to meet the demands of modern travel and traffic.

The whole aim of the Health Department is the prevention of physical ills and the saving of life; and, as an instrumentality to this end, and for the greater glory of St. Louis, I believe the Electric Ambulance Car will have a place in the conduct here of municipal affairs until time and onward progress shall reveal to inquiring minds, means and methods as superior to it as it will be found to surpass those which it has replaced.

Fauvel Writes.—"Yes, odors have an injurious influence on the vocal cords, and I have obtained from several directors of singers, managers of opera, a rule forbidding any bouquets or flowers being sent to dress ing-rooms or presented on the stage. There is, following the inspiration of strong odors, such as violets, pinks, lillies of the valley and mignonette, a vibratory struggle between sonorous undulations. The vocal cords, at contact with odors, go into a state of paresis, from default of contractions; they become halting, or crippled."—*Cincinnati Lancet.*

EDITORIALS

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and as a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st. That intended for the Veterinary Department to T. E. White, D.V.S., Sedalia, Mo.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 914 Locust Street, St. Louis.

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The Reporter Nuisance Once More.

It may seem that we are harping too much on the harmful influence which the admission of the reporters to the floor of the St. Louis Medical Society has wrought to that body in the last few years, but truth cannot be told too often, and repetition of, and insistance on, this point may eventually lead to the abolishment of a nuisance which is becoming more and more glaring and intolerable to the decent element in the Medical Society.

To day we only record another example of "licentiousness" of these representatives of the press. In last Sunday's edition of one of the daily papers a report, as usual, was given of the proceedings of the Society. No paper would dare to omit such an important feature of specific St. Louis journalism. The people want it and even crave it. So say the newspaper men. Many readers hunt on Sunday morning for the report of the Medical Society first. It is looked upon as one of the principal and most attracting features of the Sunday editions. They expect something pathologically gruesome, surgically phenomenal, and neurologically abominable, and the reporter does his level best not to disappoint the reader.

The occasional doctors' quarrels are the sauce with which the savory morsels of pathological information are served to suit the appetite of the average newspaper reader. As stated on another occasion pen pictures are

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given of the participants in a debate which partakes in the least of a personal character, whom they like they portrait in living colors and whom they dislike they try to annihilate by ridicule. It goes without saying that the reporters' appraisement of the merits of a medical man represents the inverse ratio of that of the medical profession.

The approbrious passage referred to above consists in a pen picture of a scurrilous nature of the Society editor, Dr. Fuch, because this gentleman had the courage (impudence in the opinion of the reporters) to propose to exclude this class of citizens from the meetings of the Society.

That this is an act of cowardice and a stab in the back never enters the thoughts of this class of reporters. It is an occurrence like this which has a tendency to deter a sensitive man, however great his knowledge may be on medical matters, to open his mouth from fear of being sat down upon by the reporter, who may not like the appearance of the respective participant in the debate. This is a censorship tolerated long with enough unparalleled patience by the society. It amounts in reality to a reign of terror exercised by a few otherwise harmless individuals on whom fate and accident has bestowed a part of the power of the press.

It is not unusual to read of the remarks which this or that member is said to have made on this or that topic after the meeting is over and on leaving the hall. Comments on matters and persons intended to represent the sentiment of the Society as a whole, the popular sentiment as it were, is also one of the ever recurring features of reportorial misrepresentation; of course, they only represent one side, the side they like and with which they harmonize. As an offset we herewith publish some remarks made the other night after adjournment. Speaking of this nuisance an indignant member was heard to remark: "Knock 'em down and drag 'em out." This, no doubt, represents the sentiment of the long suffering community.

A Pathological Romance.

Every doctor knows the picture which represents a medical savant who stands in pondering attitude by the cadaver of a beautiful female. This beauty, even in death, is so potent that the dissecting knife is rendered powerless to do its destructive work.

The subject, the victory of beauty even in death, over science, is a well known and old one. But there is always room for variations and modification, even of a worn and threadbare theme.

This was no doubt the opinion of a *boarding house madam* of this city, who in her leisure moments mounts Pegasus and composes poetry. The trend of literature now-a-days is, as everybody knows, decidedly pathological. What wonder, then, that a poetical boarding house keeper should see fit to choose a theme, which in former ages might have seemed gruesome, but which now is fashionable.

The poem is entitled "The Reveries of a Surgeon" and we reproduce a few lines which have been considered worthy of publication by the *Post-Dispatch*. We believe that they are a fair specimen of this sort of *fin de siecle* literature and reproduce them for the benefit of the readers of the REVIEW.

"The surgeon sat in his office conning his
medics old,
Before him on the table lay many a thought
enscrolled;
But one which came to his brain just then
Involved a problem vast,
For the key of which he had vainly searched
All the learning of the past;
And then a thought flashed o'er his brain,
I wish I could solve the same,
That my name in science should remain."

"He pondered long the subject o'er,
And searched among forgotten lore,
But found no clew to what he thought
The world should know, but dearly bought.
As the hours passed on he formed a plan
He felt quite sure could enlighten man;
He touched a bell near the office door,
And sent a message—a line or more."

"At midnight hour bring here to me
A body perfect, that none doth see!
A muffled noise was heard at the door,
And a body laid on the cold, hard floor;
Then hurried hands conveyed to the table,
A form that was covered as well as able;
A click of the latch and all was gloom
In the surgeon's private dissecting-room."

And further on these lines occur:

"Then as he near the casement drew,
Where a lovely rose in beauty grew;
He gathered a dainty blossom white,
And there in the stillness of the night,
Returned to the room in silent tread,
And laid his offering near the dead."

The *Post-Dispatch* publishes also a picture of Dr. I. N. Love, one of the heroes of the romance, and another representing his "private dissecting-room."

This sample of pathologico-poetical inspiration is furnished by a commentary of the paper mentioned. The "Reveries of a Surgeon" are to be published in book-form and a proof has found its way to the office of the *Post-Dispatch*. The book is to be decorated by two vignettes. One shows the stern searcher after anatomical truth, Dr. Love, ready to perform his work on a female cadaver of generous proportions, in the language of the *Post-Dispatch*. The other represents the man of science as dropping a rose on the beautiful face of the dead woman, he is vanquished by the charms, which

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even death was unable to destroy; the cold, destructive dissecting knife yields to the poetic rose.

What a charming theme, and what lofty conceptions! The book, when it does appear, will bring tears to the eye of many a sentimental reader, and pathology will become popularized more than ever.

The selection of Dr. Love, to pose as a pathologi cal anatomist, is a very felicitous one. His reputation for skill as a dissector and for erudition in pathology will materially contribute towards making the book a popular one and insuring a copious and ready sale.

Whilst it is to be hoped that the table of the poetic boardinghouse keeper may compare favorably with the poetry, we heartily congratulate our esteemed contemporary of the *Medical Mirror* on this latest success ful step toward fame. We hnew all along, that he is a versatile man and admire him for his many brilliant qualities. But this latest manifestation of true genius is a revelation to us, as it undoubtedly is to the public at large and his many friends.

Committees of the St. Louis Medical Society For 1895.

At the meeting of the St. Louis Medical Society of last Saturday the president appointed the following committees:

Ethics—Wm. M. McPheeters, L. P. Pollman and F. A. Glasgow.

Executive Committee—A. W. Fleming, J. R. Croswhite and Keating Bauduy.

Elections—A. R Kiefer, W. B. Dorsett and J. P. Hennerich.

Publications and Debate—L. H. Laidley, Robert Barclay and Franz F. A. Hoogen

Microscopy—H. A. L. Rohlfing, C. W. Schleiffarth and W. L. Blickhahn.

Library—Henry Hickman, W. N. Beggs and W. J. Langan.

The selection of these committees are an additional guarantee, that the society may look forward to a most prosperous year.

ABSTRACTS

MEDICINE.

Prevention of Diphtheria from the Standpoint of the Health Officer.—U. O. B. Wingate, M.D., M.M.S.S., in a paper read in the Section of Medicine, at the forty-fifth annual meeting of the American Medical Association, held at San Francisco, June 5-8, 1894, says:

In presenting this short paper I do not claim to offer anything original or new, but merely to give the results of my observations and suggest points that may be profitably discussed.

Prevalence.—The widespread and variable prevalence of diphtheria is of great interest to the health officer. Rural statistics avail as nothing in this country, as a rule, but statistics of death from this disease in our larger cities are fairly reliable. There is one feature, however, that has not yet generally entered into our statistics, that may modify them somewhat, that is, the prevalence of croup and what proportion of cases of so-called membranous croup are cases of diphtheria. The recent researches of Dr. H. M. Biggs, of New York, which show that nearly 80 per cent of cases of so-called membranous croup were found to be cases of true diphtheria by a bacteriologic examination, are of great importance to the health officer and demand a most earnest and careful consideration. I believe all cases of croup presenting exudation in the throat should be treated by the health officer as true diphtheria, unless a bacteriologic examination proves it to be non-diphtheritic. This would seem to be, in our present state of knowledge, the only safe procedure, for certainly if there be a doubt in regard to the care and treatment of infectious diseases the public should have the benefit of it.

The following is a table showing the per cent of deaths from diphtheria on the estimated population during the years 1892 and 1893, as officially received from a few of our larger cities in this country:

New York, . .	1892	0 08	1893	0.10
Chicago, . . .	"	0.07	"	0 06
Philadelphia, .	"	0.13	"	0.08
Brooklyn, . .	"	0.08	"	0 06
St. Louis, . .	"	0.04	"	0.04
Boston, . . .	"	0.09	"	0.10
Baltimore, . .	"	0.08	"	0.04
San Francisco, .	"	0.07	"	0.05
Cincinnati, . .	"	0.09	"	0.05
Buffalo, . . .	"	0.06	"	0.05
Cleveland, . .	"	0.07	"	0.04
Washington, .	"	0.07	"	0.04
Pittsburg, . .	"	0.11	"	0.06
Milwaukee, . .	"	0.16	"	0.08
New Orleans, .	"	0.02	"	0.03

It will be observed by this table that in 1892 the largest death-rate from this disease in fifteen of our largest cities was in Milwaukee, Philadelphia and Pittsburg, being 0.16, 0.13 and 0.11 respectively; and the smallest rate for the same year was in New Orleans, St. Louis and Buffalo, being 0.02, 0.04 and 0.06 respectively. While in 1893 the largest rate was in New York, Boston and Milwaukee, being 0.10, 0.10 and 0.08 respectively; and the smallest rate was in New Orleans, Washington, Cleveland, Baltimore and St. Louis, being 0.03, 0.04, 0.04, 0.04 and 0.04 respectively. These figures are approximately correct.

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Etiology.—That the Klebs-Loeffler bacillus and its products cause all the pathologic phenomena connected with diphtheria there seems to be no reasonable doubt at the present time, but the origin of this bacillus and its habits are matters far from being settled, and these questions bear a very important relation to the etiology of this disease. Whether the bacillus originates *de novo*, or whether it is a product of evolution from other forms of life, whether it can live in the soil in its true state or is capable of taking on a form of existence non-pathogenic or saprophytic for an indefinite period of time, and then under certain favorable circumstances is capable of developing into pathogenic qualities, are questions yet to be solved. Quite an extensive experience with this disease, both as a practicing physician and as a health officer in a city which at times has led all other cities in this country in the large number of cases of diphtheria, leads me to observe that it is favored by cold, damp, cloudy weather; that it is more active in winter than in summer; that it is favored by damp, dark cellars and poorly drained soil; that in certain conditions of soil and weather it seems to remain dormant for an indefinite period of time, and under more favorable conditions, such as cold, cloudy, damp but not too wet weather, it becomes active; that sunlight, good air, good drainage and plenty of snow in its season very materially lessen its ravages. There is much, however, to be learned concerning the true nature and habits of this bacillus, and this is a difficult matter to study, for nature's laboratory, in which these bacilli operate, is far different from any constructed by man.

That defective plumbing may be an indirect cause there seems to be no reason to doubt, but I have found no evidence that the bacillus is carried in the escaping sewer air; it is more probable that the effect of inhaling the sewer air debilitates the system and renders the powers of resistance less, thereby favoring the infection of diphtheria as well as any and all other infectious diseases.

Periodicity.—Hirsch has called attention to the possible character of the epidemicity of this disease, though the cycles have extended over periods of various lengths, many of them only a few years, others lasting several decades. In the city where I reside, the two periods of greatest prevalence of the disease that have existed since records have been kept were about ten years apart, these periods lasting about two years each; at other times, although the disease has been constantly present the number of cases had been comparatively low.

Modes of Dissemination.—The means of disseminating this disease are many; from person to person by means of infected clothing of all kinds, furniture, rooms, books, papers, foods, drinks (especially milk), milk tickets, money, domestic animals, such as dogs, cats, birds, etc., and at school from everything with which the child may come in contact, as almost everything conceivable may, under certain circumstances, become infected. There is no evidence that the disease can be disseminated by the air for more than a very few feet; it is usually necessary to come in actual contact with the bacillus at its lodging place in order to become infected, and unless it is propelled for some little distance by the patient in coughing, it is rarly taken through the medium of the atmosphere.

Stage of Incubation.—The stage of incubation is usually short, not longer than two or three days; it may vary, however, being modified by the virulence or activity of the bacilli and the powers of resistance offered by the patient.

Prevention and Control of Epidemics.—In ordinary communities the health officer must first have great legal powers, and they must be executed if he is going to contend with this disease; he must also have the hearty cooperation of all the physicians in the vicinity. Without these two requisites he is absolutely powerless. The education of the people in the importance of sanitary matters is an admirable requisition, but it will not be sufficient alone, in our day and time, to cope with epidemics of diseases of any kind. The importance of law and the cooperation of physicians can not be too highly appreciated by members of our own profession. Our medical schools need to impress this more emphatically on the minds of medical students.

Cases must be isolated early and long, and to do this in most families where the disease prevails, the cases must be reported to the health officers early. Every city and town should provide means for a bacteriological examination in any and all cases where there can be a question of doubt about the diagnosis, and this is often the case.

Every city and town should also be provided with an isolation hopsital, or an isolation ward in a hospital, to which every case can be removed, if possible, and isolated from all other cases and placed under the charge of nurses trained in the care of infectious diseases. By these means a better chance of recovery is gained by the patient and the danger of spreading the disease is reduced to a minimum. These facts should be taught the people by the physicians in such earnestness that they can not fail to learn the lesson. These hospitals should not be pest-houses nor disgraced by that name. Under modern scientific medical knowledge we have no longer any use for a pest-house, and one should not be tolerated in any civilized community. With the antiseptic and aseptic care of all patients with diphtheria, as carried out by modern trained nurses under the direction of competent physicians, in properly constructed isolated hospitals, the control of the infection is absolute. A case of diphtheria early diagnosed and removed to an isolation hospital, and kept there until fully recovered or until he dies and the body properly disposed of, and the house and infected articles in the house early and properly disinfected or destroyed by fire if of little or no value, will prevent a spread of diphtheria as effectually and surely as a problem can be solved in mathematics; but the details in each case must be correctly observed to arrive at a successful result. Where

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a large number of cases exist in a community the same principles hold good, but it becomes a more complicated problem.

Isolation and disinfection are the key-notes of the prevention and spread of diphtheria, but the details of these two important measures must be as fully understood, and their importance as fully realized, in order to be successful, as the principles of asepsis in surgery.

Having isolated the patient and thoroughly disinfected all apartments and articles infected, and having cared for the case in the most approved manner known to modern trained nursing, there is one matter often lost sight of, that is, keeping the patient isolated long enough. It is well known that the bacilli of this disease may exist in the posterior naris and pharynx for a long time after all traces of exudation have disappeared, and it is decidedly unsafe to discharge patients from isolation until the mucous membrane is entirely healthy and has been thoroughly disinfected for several days after all appearance of a diseased condition has subsided.

No case, however light, should be discharged from isolation for at least four weeks from the time of the commencement of the disease, and no child should be allowed to attend school or mingle with other children until the expiration of six weeks from the commencement of the last case in a house, in case of recovery, and in many instances a much longer period of time should be observed. In case of death, the body should be wrapped in a sheet wet in a proper disinfectant and immediately hermetically sealed, and should be prohibited from transportation, but should be buried or cremated within twelve hours after death, after which all apartments and articles infected should be thoroughly disinfected, and those of the family exposed should not be relieved from quarantine for at least seven days after the disposal of the body and disinfection. This rule should also apply to all persons exposed to a case of diphtheria before thorough isolation and disinfection, whether isolated at home or removed to a hospital.

By such measures only can we expect to control the ravages of this disease, and it will require a realizing sense of the importance of such measures on the part of the health officer, as well as courage and efficient police powers and police force, at times, to carry out such provisions successfully.—*The Journal.*

The Treatment of Bleeding from the Nose.—The *Revue Internationale de Rhinologie, Otologie et Laryngologie* for August 10 publishes an article by Dr. Baumgarten, of Budapest, in which he recommends the following methods in the treatment of epistaxis: A thorough examination of the inside of the nose must be made in order to discover where the bleeding comes from. Usually there are to be seen at the anterior part of the septum, rarely elsewhere, one or more small superficial vessels of a red color, or else little nodules, erosions and varicose veins, or a small empty vessel looking blackish on a red background. Occasionally the hemorrhagic spot is covered with fresh blood crusts which must be softened and carefully raised in order to expose the appearances referred to. If there is nothing of a suspicious nature to be seen, the patient must be made to blow his nose several times. Another method is to apply a tampon of wet cotton to the septum, and press it more and more firmly against the place until the morbid spot bleeds. Sometimes this brings on at once a more abundant hemorrhage, which makes the continued application of the tampon necessary before the bleeding spot can be destroyed. For this destruction the author has used the galvanic cautery or chromic acid, sometimes both. He touches the spot with the cautery, which is very painful, and the wire loop can not always be withdrawn while it is still red, so that the eschar is apt to be removed at the same time. Then the small wound bleeds feebly, and it should be cauterized with chromic acid, which, according to Dr. Bresgen, is an excellent hemostatic. When operating on children or on timid persons Dr. Baumgarten uses the chromic acid only, but the cauterizations must be repeated two or more times after the eschar has fallen or after a fresh hemorrhage. This treatment must be continued until a plainly visible cicatrix is produced. The patient must be told not to scratch the eschar, to apply a little oil or grease to the spot, to keep quiet, to avoid handling his nose, and not to blow it too hard.

Sometimes sneezing occurs, and this may bring on a hemorrhage through the eschar. In this case the application must be renewed. A hemorrhage must always be arrested before cauterizing the spot from which it proceeds. After the source of the hemorrhage has been ascertained the spot is washed with warm water, the nostril is dilated, and as large a tampon as possible is inserted, against which the wing of the nostril is pressed with the finger. That generally suffices, as nearly all forms of epistaxis have their origin in the forepart of the nasal passages, but the patient must hold himself erect and remain quiet. After this pressure has been continued for a moment the tampon is slowly withdrawn in order to find the origin of the hemorrhage. A second tampon is then pressed against the spot. The epistaxis is thus often arrested. Afterward the place may be cauterized with chromic acid. The author has often succeeded in covering the bloody points with a layer of chromic acid by pushing the tampon forward very gently; it can not always be removed immediately, because the wound will bleed anew, and it must be left until the following day, or longer if necessary. The author, however, has never had to repeat this for more than three days. He always uses cotton saturated with carbolic acid or some other aseptic cotton, but never iron perchloride, as that only cauterizes.

If the blood runs through the tampon or into the pharynx, the physician should use the same means as those employed in the more serious hemorrhages. After the part has been washed with warm water, a strip of

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iodoform gauze as wide as a finger should be pushed as far as the choana; then the entire nasal fossa should be packed with the same material. This may be done easily and without pain; it is better than Belloq's method, and may be accomplished even with a contracted nostril. With regard to Belloq's method, Dr. Baumgarten thinks it is not sufficient, and that it may produce accidents to the ear, etc. In one case, that of an old man who was the subject of advanced arteriosclerosis, Belloq's tampon was inserted, and several tampons were added anteriorly. Two physicians had tried to stop the bleeding, but their efforts had been of no avail. The velum of the palate had been cut, and it was ulcerated and edematous. The author, who was called in, immediately removed everything, and while the bleeding continued he applied strips of iodoform gauze, and two days afterward the hemorrhage was arrested.

As a palliative method, or in cases where the anterior tampon is not efficacious, or where the patient is taking care of himself pending the physician's arrival, the author recommends the use of warm water, which is a better hemostatic than cold water or ice water, or else lemon juice. A solution of iron perchloride is an excellent hemostatic, he says, but it cauterizes the neighboring region and prevents the physician from distinguishing the diseased spot.

When the hemorrhage finally stops, and the bleeding points are found, they must be cauterized. There is no harm in cauterizing somewhat around the bleeding spot; on the contrary, the indications are to burn the entire vicinity. In case of arteriosclerosis the author has been obliged to cauterize the entire pituitary surface as far as the choana, as the iodoformed strips were removed one after another. These cauterizations should be repeated several times, and every suspected place covered anew with chromic acid. These tampons of iodoform gauze are not disagreeable to the patient, and they may be left for two days. Before removing them the nose should be washed with warm water, and the strips of gauze should be drawn away very gently in order to prevent the hemorrhage from breaking out again, and any suspected places immediately cauterized, even at the risk of touching a healthy spot. The patient may take wine and iron, but should avoid coffee, tea, and effervescing drinks. All internal medicines are useless and harmful.—N. Y. *Med. Jour.*

Conjunctivitis, Acute and Chronic.—Moore contributes and article on this subject to the *Post Graduate.* This is, perhaps, one of the most obstinate forms of acute or subacute conjunctivitis to deal with, unless the cause is appreciated. It is best in all cases of conjunctivitis to examine the tear-passages and ascertain their condition. If there is obstruction, treat the nasal end of the lachrymal duct by sprays or powders, and use mercuric bichloride (1 to 8000) on the conjunctival cul-de-sac. If this does not remedy the lachrymal obstruction, then open the canaliculus by the Bowman operation, thus giving free drainage. This, with the use of the antigermicide, will cure the condition. These cases, treated in the ordinary way by the application of astringents to the eyelids, will, as a rule, avail nothing, but speedily respond to the treatment outlined above.

Nasal conjunctivitis, by which we mean inflammation of the mucous membrane of the eyelids, due not to obstruction of the lachrymal duct, but to an interference in the free nasal breathing and ventilation of the head through the nose, due in most instances to a hypertrophic rhinitis, and, perhaps, to enlarged turlenated bodies. The symptoms of these cases persist even when the most approved method of treatment have been used for simple conjunctivitis, and the redness of the eyelids and the blepharitis only gives way when the nasal obstruction and rhinitis is under control. We could cite many cases where this cause had been overlooked, and which speedily recovered on the treatment of the nose and throat.

Traumatic conjunctivitis is frequently met with as the result of the injury of the mucous membrane by the entrace of foreign substances, and which speedily gives way on the removal of the exciting cause. After exposure to the sun's rays, or the impact of air in sailing or rapid driving, we frequently observe a form of conjunctivitis, which we justly call traumatic. We have all seen, doubtless, the conjunctiva sunburnt and air inflamed. For these forms we use the application of cold compresses ten minutes at a time, four times a day, together with protecting colored glasses and moderate out door exercise; in fact, most all the simple forms of conjunctivitis do much better in the air than when housed. Occasionally, in traumatic conjunctivitis, with moderate secretion, an eye lotion of alum and boracic acid, three grains each to the ounce of water, will be found efficient and soothing. Electric-light conjunctivitis comes under this class, and is now quite often seen; especially in those engaged in works where the arc light is used. Protection of the eyes by colored glasses and abstinence from the usual employment for a few days will usually rectify this difficulty.

In the treatment of all the forms of simple, acute, or subacute conjunctivitis, we are in the habit of prescribing applications to be made to the closed eyelids of cold water, by means of cloths or pieces of old linen. These dipped in cold water or, better still, placed on a piece of ice and then transferred to the eyelids, make a very soothing and beneficial form of treatment. Then a solution of alum and boracic acid, as mentioned above, is given the patient to use at home, 2 drops in each eye, twice daily.

Purulent conjunctivitis is the most serious of all the inflammations of the membrane we have to deal with, and we know of nothing more sad than the picture so frequently seen of the helpless infant, but a few days old, presented for our care, with both cornea infiltrated, the eyelids bathed with pus, and the eyes hopelessly destroyed, when, if the appropriate remedies had been used, the child would have been saved a lifetime of misery. Another form seen in the adult is the purulent

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conjunctivitis caused by the germ of gonorrhea,—an exceedingly disastrous inflammation, and one that will destroy the eye within forty-eight hours unless treatment is very promptly inaugurated. The eyelids are very much swollen, and the skin red and glossy, and the secretion copious. In either the infant or the adult, if only one eye is affected, the non-affected should be protected and shielded from inoculation by means of "Buller's shield," which is simply a watch crystal held in position by means of adhesive plaster. Thorough cleanliness is godliness in this instance, and should be rigorously carried out; in fact, this class of patients should only be treated as in-door patients, and then isolated. All things used in removing the secretion from the eyelids should be promptly incinerated, and thus all further danger of contagion removed. The eyes should be cleaned as often as the secretion accumulates,—every half-hour, if necessary. The eyelids should also be opened and the secretion removed by the use of a small syringe, injecting through the cul de-sac and over the eyeball a solution of mercuric bichloride (1 to 8,000), in order to cleanse and, at the same time, act as an antiseptic. If the secretion is considerable and there is not much bleeding from the palpebral conjunctiva, applications should be made by the medical attendant to the everted eyelids of a solution of silver nitrate, ten grains to the ounce of water. This should be in many cases applied twice daily, and continued until the secretion begins to diminish, when the strength of the solution may be reduced to five grains and the applications made once daily. It is extremely important that applications of iced cloths should be kept up in the adult continuously for the first few days and in the infant as frequently as tolerated. The best way is to take a large piece of ice, wrapped in flannel, and upon this place small squares of old linen, and when they are thoroughly cold transfer them to the closed and inflamed eyelids. When the cold becomes too intense, the applications may be interrupted for a time, or when the cornea shows signs of lack of nutrition, they may be altogether omitted, and even warm compresses applied; this, however, is rare. After cleansing and making the silver-nitrate applications, it is best to fill the conjunctival cul-de-sac with vaseline, as it has been found to lessen the secretion and probably render the propagation of the germs more difficult.—*Therapeutic Gazette.*

The Localization of the Reflexes.—Jendrassik (*Deutsches Archiv f. klin. Medicin*) classifies the reflexes into three groups. In the first he includes (*a*) physiologic spinal reflexes (the deep reflexes); (*b*) pathologic reflexes; (*c*) vaso-motor reflexes. Among physiologic spinal reflexes he includes tendon-reflexes, muscle-reflexes, periosteal-reflexes, bone-reflexes, joint-reflexes and the bulbo-cavernous reflex. They have in common the following characteristics. They may be induced from points of slight sensibility. The reflex act is not attended with a specific sensation. It results from simple mechanical irritation, as from a blow. The intensity of the induced movement depends somewhat upon the individuality of the subject, but not to the same degree as in the second group. Other things being equal, the result is proportionate to the intensity of the stimulus. (As a rule, persons in whom the reflexes of this group are well developed display those of the second group in a slighter degree). The reflex act can be induced by the examiner in himself as well as in others. The period of tendency is exceedingly short. The resulting movement is a simple one, and obviously purposive. These reflexes are increased by active muscular activity. In case of cerebral palsy (after the lapse of a certain time) these reflexes are exaggerated. Retardation is not observable. Psychic influences are without effect upon them (although removal of attention makes them more ready of occurrence). The only pathologic spinal reflex named is the movement of flexion, more rarely of extension, of the lower extremities, known as the pseudo-knee phenomenon. It may be induced from any point of the affected part, even from the cutaneous surface. It occurs without subjective sensation. It may result from pinching, pricking, and other irritations, particularly if long continued. The effect depends upon the duration of the irritation. The period of latency is rather long, but not always alike. The movement is always the same, and affects the entire extremity in regular sequence wherever the irrigation may be applied. This reflex occurs only when the cord has been completely divided. It is not affected by physic influences. Of vasomotor reflexes only the contraction and dilatation of the vessels and contraction and dilation of the pupils are mentioned. The reflexes of the second group are designated cerebral (cutaneous) reflexes. They include the scapular, the abdominal, the cremasteric, the scrotal, the plantar, the auditory (the ear), the orbicular, the palatal, the conjunctival and the anal. They possess in common the following characters: They are induced from sensitive points, particularly those that are not accustomed to contact with other bodies (as for instance in tickling). The occurrence of the act is preceded by some sensation, such as of a prick, of cold, of tickling, etc. The object of the irritation is to arouse a definite sensation; and the exposure must be longer than in the first group of reflexes. Slight contact often brings about a more active result than energetic contact. Individuality plays an important part in the result. These reflexes are scarcely, if at all, to be induced by the observer in himself. The period of latency is longer than in the first group, but not so constant. It depends upon the period of recognition and corresponds to the reaction-time. The resultant movement is simple, but its main character is the avoidance of irritation. Increased muscular activity does not increase the effect, but, on the contrary, at times prevents the reflex. This is diminished in cases of cerebral palsy. If sensation is retarded this reflex is also. It may be diminished by physic influences, though it may be thus increased (removal of attention diminishes the reflex). In the third group of reflexes are included

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those that are related to special centers, and are complex Among them are the usual (sneezing), the uvula (vomiting), the esophageal (deglutition), the laryngeal (coughing), the vesical (micturition), the rectal (defecation), the genital (ejaculation). They possess the following characters: They are induced from sensitive areas. The act is preceded by a specific sensation, which plays a still more important part than in the reflexes of the second group. The production of the act requires the most protracted irritation. The individuality is of great influence upon the result. The reflex may be induced by the observer in himself, but there are specific irritations. The period of latency is long. The resulting movement is very complicated and bilateral. Several muscle-groups, in some instances even antagonistic muscle-groups, take part in the act. Muscular activity somewhat diminishes the reflex. In case of cerebral affections the reflex is either increased or diminished. Psychic influences have considerable importance in the production of the act. The reflexes of this group belong to the vegetative function.—*American Journal of the Medical Sciences.*

SURGERY.

Chemical Importance of the Ptomaines or Cadaveric Alkaloids in Medico-Legal Analysis.—The great advancement that has been made in physiological chemistry of late years has materially affected some of the views formerly entertained by our older investigators, as the result of the actual experiments of the many workers in that important field of scientific research has added much to the work of the toxicologist. It is at present a well known fact, that the excretions of all living things contain substances that are poisonous to the organism which secretes it Thus, for example, a person may be carefully dieted, and allowed to drink only absolutely pure water, eat food of the very best quality, and breathe the purest air, yet in the excreta can be and has been found poison. Now where does this poison originate, and what are its effects on the system in its various transformations? Is the presence of such poison and its products not easily mistaken, in cases of medico-legal analysis, and liable to cause error on the chemist's part, by the use of certain tests, to ascertain the presence of the poisonous vegetable alkaloids? "Especially as the quantity operated on is usually small, by the presence of these he might be unconsciously led into error. There is abundant evidence that such has been the case; and possibly some innocent life may have been sacrified by the finding of poison that was due to natural causes, and which already existed in the body or originated after death by the processes of putrefaction, which, by the delicate color-reaction tests, may have been mistaken for that of administered poison of the vegetable alkaloids. But, fortunately, the chemical analysis was generally regarded in former years as a link in the chain of evidence; and as the art of poisoning by organic alkaloids is of a comparative recent origin, it requires little or no comment, as toxicologists have thoroughly proven themselves equal to the difficulty.

In the recent celebrated Dr. Meyer poisoning case, in which I was associated with Prof. Witthaus as defense chemist, during the second trial, we found that Dr. Meyer and his vile associates were not familiar with the use of alkaloidal poisons. The dreadful vocation of poisoning in every other form was familiar to them; and Chicago Jack when on the witness stand surprised all by his cold blooded testimony. "He said that he had suggested to Dr. Meyer that he should use nitroglycerine to accomplish his purpose, as it was in his experience the best drug to use, because a chemist could more easily be deceived by it. He stated that the way to work it was to engage a boat on a warm day, entice the victim to go for a row, give him a drink of whisky dosed with nitro glycerine, and then set him adrift; when discovered dead, they would pronounce it a case of death from sun-stroke. He had practiced the use of different poisons on poor tramps in the slums of Chicago, and the nitro glycerine was the surest and best." Yet by turning State's evidence, this wretch enjoys his freedom in this free land.

The microscope has revealed to us the size and shape of the various cells of which our bodies are composed; but in the study of these elements of life, we must not be forgetful of the fact that they have a chemistry as well. The life of the cells is influenced by their surroundings. They grow, and perform their allotted work, when supplied with the proper pabulum, and become injured when the product of their own activity collects around them. This poison, therefore, originates in the metabolic changes, which splits up the organic molecules into their simpler parts, the final result being urea, ammonia, water and carbon dioxide. That during this process of change some of the intermediate products are highly poisonous, is already well established. The difference in quantity and quality depends on the nature of the proteid acted on, and the force with which the action takes place. The human body resembles a colony of fungi or cells, which, when their functions are not interrupted, are normal, so to speak. Each cell changes its environments into itself and the products of its secreta. Thus our whole body really lives by the joint ferments of its structure, each cell, or group of cells, supplying its special functions. Any cause by which the cells are prevented from doing their allotted work produces disease, the study as to the causes of which has of late assumed great importance. As the methods of many of the pathogenic bacteria are due to the production of this form of poison, and as it is found to exist in the dead body, it has received the name "Ptomaine." All putrefaction is now considered due to the action of bacteria. The results of the growth of these organisms form a very complex class of substances, which are known as ptomaines, or cadaveric

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alkaloids. They are produced from albuminoid sub stances by the influence of putrefactive decay. Unfor tunately, they bear a very marked resemblance in many ways to the class of substances known as the vegetable alkaloids, both in general character and chemical be havior. There has been separated up to the present time about sixty separate ptomaines. Each of these has been so thoroughly studied that its respective chemical formula is already known. Some are intensely poison- ous, while others are inert. I will not attempt in this short paper to enter minutely into the special actions and the respective tests allotted to each, by which each can be recognized without doubt, but will present to you the method by which these ptomaines can be isolat ed, and arrange these into classes according to their be- havior and solvents, and also give some of the indivi dual tests whereby, in the same solvent, the identity be tween ptomaines and vegetable alkaloids can be estab- lished.

These ptomaines, or cadaveric alkaloids as they are sometimes called, possess all the characters of the vege- table alkaloids, are alkaline in reaction, and combine with the acids and form salts. Some are liquid, some solid, others crystalline. Some are very poisonous, while others are not. Their behavior towards the gen- eral reagents for alkaloids is similar to that of those used for the vegetable in many respects. From their very origin there is great difficulty in the separation of these cadaveric alkaloids or ptomaines, on account of the complex nature of other substances and the great numbers associated in the decomposing mass. Many methods have been devised, but the one most com mendable is as follows, which has been used with suc- cess by that famous Italian investigator, Prof. Selmi, and others.

Separation of the Ptomaines.—The material is divided as finely as possible and placed in a suitable- sized flask, to which is added twice its volume of 90 per cent alcohol. If not already acid, acidulate it with tartaric acid, and from time to time see that it is acid in reaction. This flask is now connected with a reflux condenser, placed on a water-bath, and kept at a con- stant temperature of 70° for twenty-four hours. The warm liquid is then transferred to a special apparatus for filtering by the aid of atmospheric pressure. The liquid is poured on a damp cloth, placed on a perforated porcelain funnel, which is connected below with a re ceiver, from which all air has been exhausted by an aspirator, thus securing rapid filtration; and by the re- peated washings, the mass is thoroughly exhausted. This acid alcoholic liquid is now transferred to the fol- lowing apparatus: A tubulated retort, of suitable size, is connected to a tubulated receiver, by means of a suit- able cork covered with membrane to exclude air. In the tubule of the retort a small perforated cork is placed, through which runs a glass tube extending near the bot- tom and finally drawn out at the lower end. The tubule of the receiver is connected with a Liebig bulb, contain- ing dilute H_2SO_4 (1 to 10) and the bulbs are connected with an aspirator, by which means a fine current of air is drawn through the liquid and keeps it constantly agitated. The retort is kept on the water bath at a tem- perature of 28° to 30°. The receiver is kept cool by a current of water passing over it. In this way the dis tillation of alcohol goes on rapidly, and decomposition is so far prevented that volatile bases are never found in the bulbs. The aqueous extract, after the removal of alcohol by the distillation, is filtered and extracted with ether as long as anything is dissolved. It is then mixed with powdered glass and evaporated to dryness *in vacuo*. This residue is repeatedly extracted with alcohol, and the alcohol is again distilled by the process above de- scribed. The residue is then taken up with distilled water, and filtered; then it is made alkaline with sodium bicrrbonate, and repeatedly extracted with ether, ben- zine and chloroform. Now, in order to obtain the base extracted by these solvents, if bulky, the greater part may be evaporated on the water-bath, and the remainder allowed to spontaneously evaporate. By this process a great many ptomaines or cadaveric alkaloids have been separated, studied and identified.

The following is a tabulated statement of these pto- maines, which have been arranged according to their behavior to solvents; and the action of some of the re- spective tests as compared with those of vegetable alka- loids.

I. This includes ptomaines which pass from acid so- lution over to ether.

General Tests.

1. Tannic acid.
2. Iodo-iodide potass.

The action of the first two tests gives similar results to those obtained from natural vegetable alkaloids.

3. Chloride of gold.—No precipitate.

On evaporating four or four drops of aqueous solution, the addition of three drops of Hcl and one drop of H_2SO_4 gives, on warming, a beautiful violet color. Nit- ric acid colors it yellow.

Ptomaines of this class might be mistaken for digi- talin, which is also taken up by ether from acid solu- tions.

Digitalin.

Evaporate to dryness and treat with H_2SO_4.—A rose olor, turning mauve with vapor or bromine.

II. Ptomaines which pass from an alkaline solution over to ether. This group gives various color reactions and forms crystalline products. The physiological test produces short dilation of the pupils and diminishes the frequency of respiration. With the following test may mistake morphia.

Ptomaines.

1 Iodic acid.—Decomposes.

2. Phospho-molybdic acid.—At first a violet chang- ing to a blue color reaction.

3. Plat. chloride.—A precipitate.

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MORPHIA.

Iodic acid.—Decomposes.

III. Ptomaines not soluble in ether but soluble in chloroform as obtained from alkaline solutions. All the bases of this group are strongly acid and possess a pungent, bitter taste. They decompose very readily on evaporation of chloroform, even at a low temperature.

TESTS.

1. Iodic acid.—Reduces all the bases of this class.
2. Iodo-iodide potass.—Produces crystalline products.
3. Sulphuric acid.—A red color.
4. Frehdes reagent.—A red color.

IV. Ptomaines insoluble in ether and chloroform, and which readily pass from alkaline solutions over to amylic alcohol tests.

1. Hydriodic acid.—Long needle crystals.
2. Amylic alcohol.—A base which does not reduce iodic acid and gives no color with the usual tests, and which makes a mistake with plant bases impossible.

WARMING.

Morphine.—Can also be in this class.

The color tests and all known tests for it should be applied.

V. Ptomaines which are not extracted by either ether, chloroform or amylic alcohol, but which are soluble in water and almost tasteless.

1. With sulphuric acid.—No color reaction.
2. Chloride of gold.—Gives no precipitate.
3. Chloride of mercury.—Gives no precipitate.
4. Hydriodic acid.—Gives no precipitate.

It is, of course, necessary that the solvents and all materials used in extracting, and the reagents, should be absolutely pure. In separating and isolating the ptomaines from the vegetable alkaloids a good microscope is indispensable, as the crystals formed by the latter are very marked. When one considers that in some cases not more than two or three drachms of fluid are available for chemical analysis to determine the presence of the different poisons, he will have some idea of the importance of the delicate nature of the work of the toxicologist.—Wm. B. McVey, in Boston *Medical and Surgical Journal.*

Pistol Shot Wound in the Knee-Joint.—Strict Asepsis.—Recovery, with Perfect Restoration of Function.—G. W. Simpson, an officer of the United States Navy, was, on Jan. 29, 1894, while serving on board the U. S. S. Detroit, at Rio de Janiero, during the demonstration made by Admiral Benham against the Navy of the Brazilian insurgents, shot by a thirty-eight caliber Colt's Navy revolver bullet.

When the missile struck the right leg on the inner aspect of the knee-joint, the leg was slightly flexed. It entered the knee-joint in the space between the inner condyle of the femur and the upper articular surface of the tibia, passed backward through the condyle for a short distance, then again into the joint, traveling under the patella, and coming out on the outer side of this bone. He was immediately attended by surgeon J. C. Hibbert, U. S. N. There was considerable hemorrhage, which ceased under compression.

The wound was probed and rendered aseptic according to modern technique. The patient suffered considerably, having also a fractured rib, and a severe contusion of the left leg; adding to this the intensity of the heat on board the ship at this time, he was subjected to considerable discomfort.

The wound never suppurated, healed rapidly, but was kept in the splint for over eight weeks; when this was removed, there was great tenderness in the region of the patella, the slightest pressure causing severe pain. The joint was found to be stiff, and practically ankylosed at this time. He came to me through the courtesy of surgeon J. C. Byrnes of the Norfolk Navy yard, where he had been sent for treatment from the South Atlantic Fleet. He came under my care for the ankylosis on May 2, 1894, and I began careful passive motion which was not painful enough to justify an anesthetic at any time. This was repeated every two or three days, as the condition of the joint permitted, and was kept up for three months. The patient was discharged cured, the motion in the joint being practically as good as ever.

This case is reported because it demonstrates that perforating wounds of the joints which fracture one or more of the bones entering into the formation of the articulations, if treated aseptically from the beginning, with complete rest and careful passive motion at the proper time after the injury, can be completely cured with full restoration of function.—John A. Wyeth, M.D., in New York *Polyclinic.*

On Immediate Surgical Interference in Cases of Perforation of the Stomach by Ulcer.—Under the above caption, Michaux, of Paris, reported to the Eighth French Congress of Surgery, October 10, 1894, the details of an operation performed by him September 23, 1894, whereby the life of a patient was rescued from peritonitis and death. The cause was perforative ulcer; the patient, a robust man, aged 31 years. The symptoms on admission to Beaujon Hospital were those of peritonitis rapidly extending. The history was clearly that of round ulcer.

On opening the abdomen, Dr. Michaux discovered a small linear perforation high up on the anterior surface of the stomach, very near the cardia. At each respiratory movement a leakage of fluid from the stomach took place from this orifice.

The abdomen was washed out with boiled water, and large antiseptic sponges were placed, for protection, in the lower part of the abdomen. The surgeon endeavored to suture the borders of the perforation, but the silk threads tore through on account of friability of the tissues. The high, inaccessible situation of the ulcer

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rendered excision impossible. As a somewhat desperate experiment Michaux made a fold of the front wall of the stomach by which the perforation was completely buried; the ulcer was fixed in the bottom of this fold by a double row of Lembert silk sutures; the first row extended beyond the ulcer, which could be seen, and which had the dimensions of a five-franc piece. The wound was left open, an iodoform-gauze tent being inserted for drainage.

The patient was fed by the rectum for a long time; the gauze pledget was left in for eight days. A purulent fistula remained for six months; it then healed and the patient was reported as perfectly well and able to work.

Michaux remarks that perforation is a frequent complication of ulcer (13 per cent), and often takes place when the ulcer is on the anterior wall, near the cardia. The signs by which perforation is recognized are, agonizing epigastric pain, a sensation of burning and of rending, increased by ingestion of food and drink; retraction of the belly; vomiting infrequent or *nil;* in fine, signs of peritonitis with elevation of temperature, or collapse with hypothermia, tympanitic distension, etc.

Mikulicz, in 1883, was the first to operate for peritonitis caused by perforation of round ulcer. Since then the operation has been performed by Steinthal, Nissen, Korte, Czerny, Stelzner, Kriege, in Germany; by Hastings, Gilford, Howard, Lee, Dickenson, Morse and Maclaren, in England; by Roux, Poucet, Walther, LaDentu, Michaux and others in France.

Michaux's statistics of the operation done under such circumstances comprise twenty five cases in all; the first ten were fatal; of the following fifteen, there were five recoveries and ten deaths. Kriege, of Berlin, had the first successful case, those of Morse, Maclaren, Roux and Michaux were also successful. The operation should be done early to be of any effect. Michaux emphasizes the importance of a very early operation—certainly within the first fifteen hours—and of a very free incision, with subsequent free drainage.—Boston *Medical and Surgical Journal.*

The Present Position of the Treatment of Hydatid Disease in Australia.—From a large personal experience in Australia where hydatid disease is so common, and as a result of observation of the practice of others, William Gardner, M.D. (*Australian Medical Journal*) has arrived at the following conclusions:

1. It must be admitted that simple cysts of the liver are occasionally cured by tapping or aspiration, but, inasmuch as it cannot be told beforehand whether the cysts to be dealt with are simple or not, tapping is contraindicated in almost all hydatids, on account of (*a*) the risk of death from shock, and (*b*) the large number of cases which have ultimately to be subjected to a radical operation, and are by those preliminary aspirations and tappings rendered less favorable cases for the major operation. The only exceptions I would admit are in cases of advanced pregnancy or in the presence of grave organic diseases which in its nature is necessarily fatal. In these cases, tapping or aspiration of hydatid cysts may be resorted to as a palliative measure.

2. Radical operation by incision and immediate removal of the parasite is indicated in the following cases:

(*a*) In all hydatids of the external surfaces of the body, the fibrous sac should be dissected out like a tumor, and the wound closed, except in cases where scarring is of importance, as in the breast and in the neck. In these a small opening may be made, the contents removed, and the wound in the cyst sewn up or drained.

(*b*) In all unruptured hydatids of the lung a radical operation should be immediately performed, on account of the great risk accompanying spontaneous rupture, which is frequently caused by the removal of even an hypodermic syringeful of fluid.

(*c*) In all cases of spontaneously ruptured hydatids of the lung, in which the patient has escaped the risks of flooding the lungs or blocking the glottis with membrane, we may reasonably wait, but if a suppurating and freely secreting cavity be left, the interests of the patient are best consulted by excision of ribs, and drainage at the lower point.

(*d*) All hydatid of the abdomen should be subjected to some form of radical operation, whether suppurating or not. In the case of the spleen and the kidney, there are cases in which it is necessary to perform splenectomy or nephrectomy.

(*e*) The treatment of hydatids of the brain, spinal canal and orbit should be radical, but as I have seen only one case of each myself, and as the whole Australian experience numbers only six reported cases in the brain, and a smaller number in the spinal canal and orbit, we are not yet in a position to speak definitely on the subject.

(*f*) Of the operations for abdominal hydatids, in which drainage is to form a part of the treatment, the best is Volkman's, with iodoform gauze plugging, for the practitioner who cannot obtain skilled assistance. When assistance can be obtained, my modification of the operation is best, viz., stitching the cyst to the parietal peritoneum all round first, then emptying of the cyst, and fixing it to the peritoneum and muscles, and douching until all the contents are removed.

(*g*) Of the operations for abdominal hydatids, in which drainage forms no part of the treatment, I think that complete removal of the fibrous sac can in rare cases be done, especially when the cyst is attached to the omentum, but that in Bond's operation my modification of fixing the sac to the peritoneum on each side by one stitch should be adopted wherever possible. Whenever the cyst cannot be brought up to the abdominal wound, it must be emptied and all fluid removed, then the hole in the sac should be carefully sewn up, and the cyst dropped into the abdomen.

3. Tapping may very rarely be indicated in cases of

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double diagnosis, to be followed by immediate operation if characteristic fluid be obtained.

The above conclusions, although presented shortly and dogmatically, represent as nearly as possible the results of the practice of the majority of surgeons of Australia who have devoted much attention to this disease.

The late Dr. Davies Thomas, the author of an elaborate work on hydatid disease, is said by the writer to have held views similar to his own.—*International Medical Magazine*

The Mechanical Treatment of Chronic Constipation.—Dr. F. Le Marinel believes that the mechanical treatment should be the treatment of choice in a large number of forms of chronic constipation. The maneuvers of massage comprise three forms—frictions, pressures and percussions. In addition, various active and passive movements are undergone—flexion, extension, abduction, adduction, cronation, supination, rotation and circumduction. The effects of medical gymnastics are studied as regards the circulation, respiration, animal heat, chemical phenomena, the muscles, bones and articulations and the local results. The effect of massage upon the absorption, muscular system, nervous system, circulation and local temperature are fully recorded (*Amer. Jour. Med. Sci.*). The technique of various authors is fully described and illustrated.

The various forms of constipation which are likely to be benefited are:

1. From anesthesia of mucous membrane.
2. From muscular paralysis.
3. From induration of the stools
4. From mechanical obstacle.

The contra-indications are:

1. Acute inflammation of intestines, peritoneum, peri-intestinal cellular tissue or of intra-abdominal veins.
2. Ulcerations (round, tuberculous) of stomach or intestines.
3. Tumors of the alimentary canal (sarcomata, carcinomata, polypi).
4. Voluminous fecal masses of stony hardness.

An interesting comparison is given of the value of diet, habit, purgatives, hydrotherapy, injections, electricity, various medicinal methods, with that described by the author, the general conclusion being that of all these methods only one can be compared to the mechanical, and that one is electricity. But when one considers the question from the standpoint of success, massage shows figures which are not surpassed by electricity. So far as facility of application, massage is superior in that it does not require any apparatus, and can be applied equally well at the house of the patient as of the physician. Further, massage is better borne than electricity and particularly by children. A series of 147 cases is reported, the treatment being that advocated in the paper. The care shown in the report, the apparent accuracy of diagnosis, the fulness of detail, give an especial value to the clinical histories. In the cases cited, those of the synoptical table and eleven in detail, 158 in all, radical cure was obtained in about 90 per cent. The final conclusions are:

1. Mechanical treatment takes rank among those therapeutic agents whose action is most energetic upon the circulation, the respiration and general nutrition.
2. It can modify the abdominal circulation, and cause certain foreign congestions, notably those which are met with in abdominal plethora, to disappear.
3. Under its action the muscles acquire an increase in volume and strength.
4. It is the best curative agent in constipation dependent upon muscular paresis or paralysis, if it is not of central nervous origin.
5. It is the best curative agent for constipation dependent upon diminished sensitiveness, or anesthesia of the mucous membrane when it is due to local causes.
6. Finally, it is formally contraindicated when constipation is due to acute inflammatory lesions or to tumors.—*Medical Record.*

Nerve-Suturing; Neurorrhaphy; Nerve-Grafting.—After reviewing the literature upon this subject, De Forest Willard, M.D., of Philadelphia, critically analyzes the histories of one hundred and seventeen cases of primary suture and one hundred and thirty cases of the secondary variety which he has had collected for him (*Medical News*). The injuries to the nerves are found to be much more common in the male, and in the upper extremities. The greatest distance in which union took place in the primary cases was two inches; in the secondary, four inches. Sensation returned as early as the first day and as late as one and a half years in the primary suture. Motion was found to occur as early as the next day, whereas it might be delayed as late as a year in primary suture, while in the secondary suture it was postponed in two of the cases for three years. Willard concludes that:

1. A sufficient number of operations of this character have been done to show that fears of tetanus are groundless.
2. Errors in reporting successful cases are often due to vicarious or substitutive functions which other nerves of the same part may assume.
3. Failure, in some cases, is evidently due to secondary degeneration of the motor cells in the spinal cord, though the sutured nerve may have united well.
4. Immediate suture of a divided nerve offers a good prognosis of restoration and motion.
5. Clean end to-end suture, and a careful freeing of the ends, for some distance, from cicatricial tissue, affords the best chance for a restoration of function.
6. The best suture material is fine chromicized catgut, inserted, by means of a small round needle, directly through the body and sheath of the nerve. Two sutures crossing at right angles are usually advisable. During the healing process the part should be completely at rest and nerve relaxed, if possible.
7. Good results may be attained by suturing end of

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a widely separated nerve trunk to freshened surface of a neighboring nerve or muscle.

8. Secondary suture offers good hope of success, and should be attempted, even years after the accident. Repeated operations may ultimately succeed.

9. In great loss of nerve substance, grafting a nerve from a freshly amputated human limb, or from a young animal, gives a better result than the splice-operation of splitting the ends and turning flaps into the gap.

10. Decalcified bone tubes are so rapidly absorbed as to be of little service in uniting divided nerves.

11. Restoration of function may take place months after the operation. Sensation returns first.

12. Though the distal portion of a divided nerve rapidly degenerates, as does an interposed graft, transmission of function is possible and regeneration may take place both as regards sensation and motion.—*International Medical Magazine.*

OBSTETRICS AND GYNECOLOGY.

A Few Aphorisms Relating to Obstetrics.—What to do and what not to do in the management of labor, that is the question.

No branch of a physician's practice requires more self-poise, and where so many complications arise, commanding our sympathy and demanding our skill, as that of obstetrics, and when disease and death follow a normal case of labor, the cause can be traced to none other than to ignorance or mismanagement.

With these preliminary remarks, Ewing advances a few aphorisms relating to obstetrics.

1. Examine the urine a week or so before the expected confinement. Albumin need not cause alarm, unless present in large quantity, in which case the woman should be restricted to milk diet, given $^1/_{10}$ grain of sulphate sparteine four times a day, and bowels kept open with cream of tartar, the object being of course to relieve congestion of the renal veins.

2. Make no digital examination without first cleansing the hands and nails, together with the external genitals, with a solution of bichloride of mercury (1 to 2000) and ethereal soap.

3. Empty the rectum thoroughly with an injection of warm water.

4. Make as few examinations as possible during progress of labor, and each time dip the hand first in the antiseptic solution.

5. If presenting part emerges slowly from the womb, do not allow your impatience to so get the better of your judgment as to induce you to "assist nature" by pulling upon the os. Probably all the deep pathological tears, calling for surgical interference, found on the right and upper anterior sides of the cervix, are caused by the finger of the accoucheur.

NOTES AND ITEMS

Pure Food and Pure Drugs.—Several States in the Union have passed stringent laws concerning the adulteration of food and drugs. This is right. Inquiries made throughout the land have established the astounding fact that almost every article of food on the market has counterfeits and adulterated substitutes, which are sold as genuine. Numerous drugs of daily use are likewise falsified. Many of these adulterations are very injurious to health, and some are actually poisonous. The State of Ohio began recently a systematic prosecution of all manufacturers and vendors of adulterated products in that State. Other States are entering the arena in behalf of their people. What will the results be? The States that do not have or do not pass promptly some wise and astringent laws against the manufacture and sale of adulterated articles of food or drugs, will become the dumping grounds of every producer of these mean, obnoxious, poisonous products, as they become excluded from other States. What will Missouri do? The State Board of Health should be empowered with a pure food law and means to execute it. The powers of this Board are very limited concerning the protection of public health in any matter. On most questions its duties are wholly advisory. Such a great State as Missouri, with its millions of human beings to save from infections and food and drug adulterers, ought to have true sanitary laws.—*The Missouri Sanitarian.*

Diphtheria and the Antitoxine.—The commercial exploitation of the diphtheria antitoxine has been begun in this country says the *Journal of the American Medical Association.* This was to be expected from the furore which has been created abroad over the discovery and from the prices charged for the foreign product—prices which would seem to afford an enormous profit. Thus, it is estimated in Belgium that a suitable horse can be bought for, say $40; that it takes three months to render him immune, during which his keep and care, in that country, will cost $35 more; that he may then be bled three times, furnishing 9,000 grammes of the serum (or 450 doses of the strength prescribed by Dr. Roux), worth, at quoted prices, 20 francs for 10 grammes, or $3,474—counting the franc at 19.3 cents American—for what cost $75 to produce. It is not to be wondered at that, at the suggestion of Dr. Jules Felix, of Brussels, delegate to the last International Congress of Hygiene, a resolution has been unanimously adopted calling upon the Belgian government to establish a State institute for the production, preservation and distribution of the antitoxin, with all possible guarantee to insure its purity and standard quality, and also to secure its gratuitous supply to all medical men in Belgium for the free treatment of the poor, and its supply at a reasonable price to those able to pay. In

the absence of the possibility of any such safeguard in this country lies one of the chief dangers of the antitoxine treatment here, and that this danger is a serious one is shown by the rancorous dispute now raging between the rival manufacturers in Europe. In which connection, by the way, it is worth while noting that shares in the Hochst establishment—one of the chief antitoxine producers and with which Professor Behring's name is closely associated—went up several points on the Frankfort Stock Exchange recently, on a rumor that the works would soon put on the market a typhoid antitoxine of Behring's discovery. Surely Behring can not already have forgotten the blow to Robert Koch's scientific reputation through a similar commercial manipulation of his name by the adventurer Levy in connection with the "tuberculin cure."

The Infectiousness of Whooping-Cough.—At a recent meeting of the Congres de Medesine Interne, held at Lyons, a report of which appeared in the *Journal de Clinique et de Therapeutique Infantiles*, for November 22, 1894, M. Weill stated that twenty nine children suffering with whooping-cough had been placed in a ward in one of the hospitals with a hundred and twenty-three others, and not one of the latter had taken the disease. Twenty days had been the minimum time of their stay in the ward. All children over seven years of age had been left out of account, also those who remained in bed while in the hospital, leaving only those who were likely to take the disease, but no infection had resulted. While M. Weill thought that no positive conclusion could be reached from these facts, yet he said, if whooping-cough was infectious in the city and not in the hospital it was because different conditions existed. The most staiking feature in this case was that the children who had been received at the hospital were in the last stages of the disease; in the city, on the contrary, contact with children suffering with whooping-cough occurred in the beginning, at a time when a diagnosis could not be made. This fact, he thought, should lead to new researches.

M. Moussous, of Bordeaux, stated that his service among those with whooping cough was isolated, al though it was evident that there had often been contact with other patients; nevertheless, he had never observed any infection. This, he thought, corroborated M. Weill's researches —New York *Medical Journal.*

Vivisection—Need of Caution and Resolution.—John P. Haines, Pres. A.S C.A , in a letter to the International Congress of Societies for Prevention of Cruelty to Animals, states the situation thus:

On the painful and difficult subject of physiological experiments on living animals, which pass under the name of vivisection, I trust that the Congress may proceed with equal caution and resolution: with caution, because there are two sides of this question, and it is possible to injure our own cause by willfully ignoring that fact; with resolution, because there is one point in respect of which we have no right to compromise.

Speaking for myself alone, I am not prepared to justify any of the operations which pass under the general name of vivisection. If it be admitted that animals have rights, I do not see how those operations can be excused unless on the ground that it is lawful to do evil that good may come of it, or, in other words, that the end justifies the means. At the same time, I must admit that, so long as men justify war, with its attendant desolation, miseries, wounds, and death to human beings, they cannot be expected to refuse the prospect, or even the possibility, of benefit to man at the cost of suffering to other animals. The question which the world asks is simply this: Whether, as a matter of fact, physiological experiments have so promoted medical science as to benefit the human race? A minority of the medical profession answers in the negative; a vast majority in the affirmative; and while the hearts of men are with the minority, their judgments are swayed by the preponderating judgment of the majority. For this reason, to wage an indiscriminate warfare against those physiological experiments is to set not only the medical profession, but the world at large, in opposition to us, and so to impair our own power in many departments of our work in which it should be our highest aim to form the public mind and create a public sentiment. It is therefore from a sense of duty that I suppress my personal feeling in the expression of the hope that the Congress may not consider it necessary to pronounce an indiscriminate condemnation on all forms of vivisection.—*Our Animal Friends.*

The Influence of Satiety and of Fasting on the Rapidity of the Absorption of Some Medicinal Substances in the Stomach and on Their Excretion in Healthy Persons.—The *Revue Internationale de Medecine et de Chirurgie Pratiques* for November 25, 1894, contains an abstract of an article published by M. F. P. Malinine in *Vratch*, No. 37, 1894. As the question is one of great interest to physicians, the author has made various experiments with potastium iodide and sodium salicylate in doses of four grains and a half, and the results obtained are as follows:

1. The absorption of these substances in the empty stomach is very rapid, but the reverse is observed when the stomach is in a condition of repletion, the absorption being then very much diminished.

2. While in the first case the results differ but slightly, not only in the same persons, but in different persons, in the second case there is a wide difference in the results.

3. The diminution of the absorption in a full stomach is shown not only by the delayed reaction of the medicaments (in the saliva and in the urine), but also by a greater lapse of time between the beginning and the height of the reaction.

4. The reverse is observed when the stomach is in a condition of emptiness.

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5. The potassium iodide appears either at the same time in the saliva and in the urine or from three to five minutes sooner in the former.

6 The latter circumstance probably depends on the unequal activity of the kidneys in different persons.

7. The sodium salicylate can not be detected in the saliva with iron perchloride.

8. The excretion of the medicaments is in proportion to the rapidity of their absorption.

9. The excretion of potassium iodide stops simultaneously in the saliva and in the urine.

10. The definitive elimination of the medicaments presents, in general, rather wide fluctuations.

11. The diminution of the absorption of the medicaments in a stomach full of food results from their mechanical mixture with the latter—which separates them from the walls of the stomach—and not from the afflux of blood exaggerated during digestion in this organ and from the increase of the blood pressure.—New York *Medical Journal.*

Diphtheria Antitoxine in New York.—At a meeting of the City Board of Health held December 5, 1894, action was taken in accordance with the following report presented by Dr. Prudden, consulting physician, and Dr. Biggs, pathologist:

"The great practical importance of the new antitoxine treatment for diphtheria, not only in controlling but in curing the disease, has created a demand for the new remedy so universal and urgent that the occasional small supplies which can be obtained from the European laboratories are wholly inadequate. It is therefore imperative that without unnecessary delay the preparation of the new remedy should be generally undertaken in this country. It has been already begun by the New York City Health Department in a limited way, and we trust that the requisite means and equipment may soon be furnished to the department for making the antitoxine in sufficient amount at least for local use.

"The preparation of this new remedy requires considerable outlay for laboratories, for the necessary animals and their safe housing and scrupulous care, and, above all, for the services of competent and experienced bacteriologists or specially trained experts. The efficiency of the remedy and the security of those to whom it is administered from any possible danger in its use depend in the most intimate way upon the skill and reliability of those engaged in its manufacture. Careful and delicate tests are required at every stage of its preparation. The strength of each lot of the remedy must, when it is finished, be determined in the most exact way by those in command of the necessary special skill and experience. It is one of the distinguishing characters of this remedial agent that its greatest efficiency is obtained only when it is administered in the earlier stages of the disease, and then in doses possessing a strength absolutely to be relied upon. Should the material used be for any reason deficient in healing power through error, carelessness, or fraud in its preparation, time may be lost so precious to the patient that it may involve its life.

"The antitoxine serum, when ready for use, is a yellowish fluid without any specially distinguishing or characterizing appearance; to the eye resembling the clear, yellowish fluid which separates from blood when it clots, from which it can be distinguished only by exact tests of its curative and protective value on animals.

"The new remedy will be at the best rather costly, on account of the time required for its preparation—always many weeks at least—and the cost of material and animals and of expert services. At present the market price of the antitoxine is unduly great, and probably will be so for some time to come, on account of its scarcity and the great demand for it.

"It follows from what has been said that it is of the utmost importance to those who use this remedy that there should be some reliable guarantee for every preparation placed upon the market that it has been prepared by competent persons, and that in every case it possesses the requisite purity and power. The preparations now occasionally furnished in this country in small quantity by the German pharmaceutical houses, Schering and the Farbwerke (Hochst am-Main), have specific guarantees as to strength and purity by bacteriologists of universally recognized skill and experience. Unless some such security is afforded, it would be quite easy for unscrupulous persons willing to commit such a crime to place on the market small bottles of yellowish fluid labled 'antitoxine,' containing an inefficient amount of the healing agent, or even none at all, and for a time at least profit by the extraordinary demand for it, perhaps at the cost of life and at the risk of discrediting a most potent and beneficient remedy.

"That this is not a merely fancied and only possible menace to the welfare of those stricken with this dreaded disease, and so often the wards of the Department of Health. is shown by the fact that already in the city of New York several different preparations of alleged diphtheria antitoxine, said to have been prepared in this country, and wholly, so far as we can learn, without proper guarantee of efficiency, have been furnished and used for the treatment of diphtheria. One of these preparations has been already subjected to the necessary crucial tests by the department and found wholly inefficient and inert.

"While we suggest its importance, we are not prepared at the moment to recommend in detail a definite form of guarantee of purity and adequate strength in this remedy such as would be practicable and desirable for the protection of the public against carelessness or fraud. But we call your attention to the matter at this early period in the use of diphtheria antitoxine in the hope that at least a warning of the medical profession and the public against spurious and unguaranteed preparations of this remedy, if not more drastic measures, may seem to you wise and useful, and appropriate to the function of this department as a guardian of the public health."—New York *Medical Journal.*

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ORIGINAL ARTICLES

The Ethics of the Profession and the Importance of Maintaining the Code of Ethics Without Further Revision or Modification.

BY M BOTTOM, M D, BRECKINRIDGE, MO.

Read by DR. J. BLOCK, of Kansas City (by request), at the Nineteenth Semi-Annual Meeting of the Grand River Medical Society, held at Brookfield, Mo., December 6 and 7, 1894.

In accordance with a resolution adopted at the last meeting of our Society in Chillicothe, I have written a paper on "The Ethics of the Profession." Permit me say that while I cannot regard the call thus made upon me, otherwise than as a high compliment, and while I am not only willing, but anxious, to make a somewhat adequate return for this mark of appreciation, I have to fear that my efforts on the subject you have assigned me, will serve merely to diversify our proceedings, rendering them perhaps more interesting, and I hope, not entirely unprofitable.

For the last three or four years our medical societies and medical journals have discussed the question of a revision of the Code of Ethics, and at the meeting of the American Medical Association at Detroit in 1892, after an exciting discussion, a resolution was adopted directing the President to appoint a committee "to whom the Code of Ethics shall be referred for such changes or amendments as they may deem it wise to recommend, if they should decide that any change is required." The committee was duly appointed but it could not agree as to the alleged necessity for changes in the Code. At the meeting of the Association held in Milwaukee in 1893, a majority and a minority report were presented, the majority report favoring changes and the minority report against changes. No action was taken at this meeting, but at the meeting of the Association last June in San Francisco, the majority report of the committee was defeated and the minority report against any changes in the Code was adopted by a large majority. It is to be regretted, for the sake of professional unity and harmony, that this action of the Association did not dispose of the vexed question of revision forever. From present indications these disorganizers and reformers will again attempt to revise or amend the Code at the next meeting of the Association.

During the discussion of the revision of the Code in the *Journal of the American Medical Association* which was carried on with unabated interest for many months, I read carefully all that was published from all parts of the country, on both sides of the question, and I must say that I have not yet seen a single reason or argument to convince me that the Code should be abolished, revised or amended in any manner whatever. Most of these reformers have been very bitter and scurrilous, not only in their efforts to criticise the Code, but in their captious and abusive invectives against its defenders. There is a great contrast in the elegant and classical style of the papers of "Conservative Member," Dr. H. D. Didama, of New York, and Dr. E. J. Doering, of Chicago, in their defense of the Code to the unprofessional and bombastic papers of the so-called reformers, "Fair Play," "Practitioner," and Dr. A. C. Simonton, of California. In dealing with these so-called reformers I shall feel at liberty to wield a free lance, but from the tone of the letters of Dr. Edward Jackson and a few others, I will here state that my strictures are not intended for them. One of the progressive reformers says "the times demand a change in the Code; amendments must be made," and in his diatribe he says that "one half of the members of the American Medical Association break some part of the Code; the bent of the time seems to be opposed to restraint. The anxiety for one to gain notoriety through printer's ink seems to be fast gaining ground." This logical reformer may know what he wants, but it is hard for any one else to find out. One asserts that the Code is old and therefore it should be abolished, and another that the Code is never enforced. There is one section in the Code that all these reformers can agree on—the one in regard to consultations. They all want to abolish or amend it. They are always willing when a fat fee is in sight to meet homeopaths, eclectics, irregulars and quacks of all descriptions in consultation. These disorganizers have always been particularly anxious to recommend a more accurate definition of the word "*consultation*." The definition of the word in the best English lexicons was not satisfactory to these carping,

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sapient Solons. "A consultation as the authors of the Code evidently designed the word to be understood, is not the interview of an ignorant suppliant with a delphic or other oracle, but is a clinical conference of medical men to examine a patient, to make a diagnosis and to agree, if possible, on a line of treatment." The language in the Code is very explicit and reads as follows: "One who rejects the accumulated experience of scientific physicians, and pins his faith to an exclusive dogma, and honestly practices, according to his public professions, has separated himself from the ranks of rational practitioners and is therefore not to be entitled to consultation privileges." These progressive self-styled reformers are nothing more or less than anarchists and are ready to abolish or revise every code of morality of religion or of law and let each individual decide for himself what is right or what is wrong. These anarchists contend that the bent of the times is opposed to all restraints, and they are not far removed from the aggressive nihilism of the Russian Bakunin who says, "in a word we object to all legislation, all authority and all influence—privileged, patented, official and legal." (N. Bakunin, *Dieu et L'Etat*).

The limits of this paper will prevent me from going into details and giving the many objectionable features of the immoral, ill-composed and absurd revised Code. I will briefly mention one or two among the many ludicrous blunders of the "revision" committee. They introduced details of preliminary education which has no place in an Ethical Code. "The spirit of the original Code implies the highest qualifications. Physicians who uphold the American Code are expected to be scholarly gentlemen well versed in the science and art of medicine." The framers of the original Code were able and accomplished physicians who were thoroughly acquainted "with language, mathematics, literature, history, philosophy and logic."

The revisers made a very foolish and absurd blunder by imposing many obligations on physicians, but scarcely any on their clients. These sapient Solons would make clients think that physicians had no rights which need be respected. The Code was made for the information and protection of the public as well as physicians and that their obligations must necessarily be reciprocal. One of the objects of the American Medical Association distinctly stated in their plan of organization in 1847, is "for the enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men." Dr. W. W. Parker, of Richmond, Va., a college mate of mine, in an address before the alumni of his college, gives this good advice to the recent graduates: "So soon as you get your diploma get also a copy of the Code of the American Medical Association and carefully study it. It will teach you how to behave towards your medical brethren. I find there is more need of the Code now than there was forty years ago." The subject of his address was, "Forty Years a Doctor,"—a very able and thoughtful paper. I agree with him that there is more need for a Code now than there was forty years ago; for never has there been a time before when the medical profession has been so bitterly assailed by quacks and charlatans both within and outside the fold and never has it been more indispensably necessary to get rid of the traitor in camp and to protect ourselves and the public from the hordes of impostors surrounding us. These progressive and aggressive reformers tell us that the Code is a dead letter and is never enforced and that there is no remedy. I admit it is seldom enforced, but the fault is with our medical societies. Our medical societies are too lenient. All violators of the Code should be held to a strict account. There is a remedy (C. Elam, M.D., "A Physician's Problems") beyond this that is plain, palpable and on the surface—difficult in detail, but ultimately practicable—an ethical education in our medical colleges which co ordinates the faculties of the mind which gives exercise to reason and judgment, at the same time that it represses without ignoring the instinctive part of man's nature and will elevate him in the scale of creation and turn those faculties to the service of his fellow creatures; by the fostering of good feelings the cultivation of good principles and a regular training in good habits. Sir James Crichton Brown, at the recent opening of the Sheffield Medical School, says that he is free to admit that the majority of his colleagues are competent to pursue the path of rectitude without a printed guide book, but for the weaker brethren, "a code of honor, supplemental to the general Ethical Code, is an *admirable tonic*." Let us remember that there are some of our weaker brethren always with us and that they are especially weak in the spine and that the Code is their best tonic. (*Jour. Amer. Med. Ass'n*, June, 1894).

"A physician's first duty is to his patient; his second only to himself." Dr. Oliver Wendell Holmes says that the physician who has never broken this rule deserves canonizing better than many saints in the calendar. "All quackery reverses this as its fundamental axiom. Every practitioner who reverses it is a quack." Let us tell the truth and avoid lying—the great temptation to which physicians are always exposed. In the absence of all legislative enactments for our protection, we have nothing to look to but the associated effort of a united profession, bound firmly together by a common interest and prepared to act with decision and energy against all who violate those rules adopted by the wisest and most experienced of the profession, as "the expression of the great principles of truth, justice and honor, in their application to the relations of physicians to one another, their patients and the public." For the benefit of these progressive revisers and all who are opposed to our "*Code*," I have revised their own Code and their maxims; for let us not believe for one moment that they have no Code. In the words of Dr. Doering: "They are the most fanatical worshipers of their chosen Code—the Code of the *Almighty Dollar*. They would sell their birth rights for a mess of pottage and prostitute their professional honor for a paltry fee" I have

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made (*Virginia Medical Journal*, 1886) some additions to their "medical ethics; or, stale maxims in medicine."

Maxim 1. Set up your carriage. Let your carriage or buggy be elegant and your horses fast goers. You should never be seen lolling in your carriage or looking out at any one. Always appear to be making notes of your appointments and call out every now and then to your coachman to drive faster. The horses should always be showy and stylish.

Maxim 2. Search the medical journals for a long list of desperate cases, which must be carefully committed to memory and make them all terminate favorably under your own treatment. Entertain your patients with a minute detail of these at every visit and narrate and expatiate on them to every one who has the patience to listen or the credulity to believe. Join medical societies and when the discussion of some rare and unique case is before the society, report some cases that you have had "just like it," and with great solemnity and importance speak of your successful treatment of such cases. Never be deterred from speaking, by the fact that the majority of the members are your superiors in attainments and experience.

Maxim 3. Never forget the celebrated maxim of old Dr. Mead and never attend church, theater, private party or even a medical society without a well arranged plan of being called out—in other words of being "particularly wanted" to attend some patient in great danger.

Maxim 4. Always tell your friends of the unusual opportunities you have had for the investigation of diseases; that you have attended hospitals and colleges in the Eastern cities, and have had special advantages in the old country and that you always kept abreast of the times. A few weeks' sojourn in an Eastern city or a trip to Europe on one steamer and back again on the next, or even the same one, will be sufficient for you to talk about for a life time and to expatiate on the great advantages you have had for acquiring medical knowledge.

Maxim 5. Have an elegantly furnished office and display your instruments, pathological specimens, microscopes and especially uterine sounds, pessaries, speculæ and reflectors. Display prominently in your office the various instruments used in diagnosis. Cover your tables with stethoscopes, pleximeters and hang a chart of the signs of auscultation on the wall and place a spirometer in the corner of the room. You will then inform all visitors that these appliances enable you to detect the slightest alteration of the pulmonary structure so that treatment may be commenced at once before the disease has become incurable. Let the visitors take a peep in the microscope at the microbes bacilli or micrococci and while they are ranged around and astonished at the sight, talk to them in words of learned length and thundering sound, and they will wonder how "one small head carried all he knew."

Maxim 6. Miss no opportunity of getting your name in the paper and always cultivate the acquaintance of reporters and give them a detailed and minute account of your wonderful cures and desperate surgical operations. This is your best mode of advertising and gaining a great reputation, and besides, it is inexpensive. Manage to get your pictures also in the public prints—the puff pictorial and the puff biographical is a good way to bring you into prominence. Give testimonials freely and endorse anything under the sun from condurage root to pokeberry juice. Endorse anything and everything, provided the testimonials be given wide circulation in the medical journals and newspapers with all your title in full.

Maxim 7. This is the grand, the keystone maxim on which all their great principles of medical ethics rest and may be stated in a few words: Extol yourself and depreciate your neighbor. This is fortunately not only the most useful, but the maxim which is most easily put in execution. No day in the week or hour in the day can pass without giving them opportunities for working this great engine for their advancement. It has this advantage too, that it may be practiced by way of amusement when you have no other practice on hand. All your friends can assist you and a gossiping female, with a long tongue can go far towards making your fortune. It is of great importance in the exercise of this leading maxim to acquire tact, for gross self-flattery invokes ridicule and open defamation of others is punished by the law. When you are called to some chronic case—an hysterical female for instance—suffering from real or imaginary uterine trouble, do not say in the presence of witnesses that the doctor first in attendance had almost murdered or ruined the patient, but by looks, tones, gestures and innuendoes you can effectually harrow up the feelings of the patient and her friends. The less danger there is in the case the more decidedly must you make it appear that there is now scarcely a chance of recovery unless some difficult surgical operation is performed. A cure under such circumstances will not only greatly spread your own fame and bring you a big fee, but it will fulfill the maxim by depreciating your neighbors.

The professors of the healing art numbering in the United States alone more than one hundred thousand may aptly be compared to a vast army, assembled to resist the invasion of an insidious and obstinate enemy. We find many elements entering into the composition of this army, some for good and some for evil. The great body of the profession are the rank and file of this gallant host, who bear the brunt of the battle. They are the regiments of the line upon whose bravery and perseverence victory depends. These are the faithful and hard-working country doctors, perhaps unknown to fame, but true followers of the old fathers of medicine, under whose banner they wage the war as long as life and health lasts. All honor to the humble, common soldier of medicine. Others may win the renown, but they deserve the laurel crown. Now and then we meet with the heavy artillery of medicine—the great guns who make loud and long reports and frequently do great

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execution. Their fame is heard over the whole land. We now and then have a Krupp gun who makes a tremendous noise and much smoke, but is apt to explode unexpectedly, spreading terror and dismay among surrounding groups of friends and admirers. Witness the late explosions in France and Germany—the "Elixir of Life," and the "Sulphuretted Hydrogen Cure," and that monumental failure of the "Tuberculin" cure of consumption. I will state, parenthetically, no disparagement is intended for Brown Sequard or Koch as original scientific investigators. Let us hope that Behring's antitoxin cure of diphtheria, which is now all the rage, may not be overcharged in loading and explode with such disastrous results. These big gun explosions in our country are of frequent occurrence. The Gatling gun, who makes extravagant claims and fills our newspapers with disgraceful advertisements recommending "cerebrine" and other nostrums for "all the ills that flesh is heir to," must not be forgotten in this list. There is another branch of the army—the flying artillery which is very showy and fashionable. They will not enter our small towns, but with a blare of trumpets and waving of flags and banners dash into our large cities, fire a broad side and then they are off again, leaving the wounded, robbed and depleted victims in a sad plight. Let me say a few words about the various irregular troops which are clustering around the main army—the volti geurs, the lancers, the guerillas and the bushwhackers of medicine. One company is armed with long drainage tubes of glass, silver or rubber, and their caps are ornamented with glittering scalpels, tied on with ligatures of catgut or kangaroo. Their canteens are always filled with sterilized water or bichloride solutions. These soldiers are always ready to invade the secret precincts of the ovaries, make fearless onslaughts on the unoffending uterus and rout the enemy in his citadel. They are always ready to charge on the least symptoms of disorder about the right iliac region, and they will boldly cut their way into the appendix vermiformis, making war on the latest fad—appendicitis, and if they find no little intruder they can find a big fee. Others march along armed with specula of silver, glass or rubber; these, like the Egyptians of old, believe in attacking only one point, they make their charges against the "ulcerated os." Not far from the main column are found the hot water quacks who are prepared to give the enemy a warm reception. The cold water quacks fight on the opposite principle and believe that disease like an old witch can only be cured by giving it a good ducking. The homeopaths are armed with pop-guns loaded with very small shot. On the outskirts of the army we find ourselves among the predatory hordes which always follow the main column and spread rapine and murder through the surrounding country. These are the Pariahs of medicine who watch about and pick up the hopeless victims of cancer, consumption and other chronic diseases. These cormorants and jackals are like the ghouls who fatten upon the substance of dying men and beguile with lying words the poor sufferer who falls into their hands. (*Virginia Medical Journal*, 1888).

Let us draw a moral from our parallel which may be useful and instructive. When the dread epidemics enshroud our ill-fated cities in darkness and despair and all the impostors, quacks and humbugs, hanging on the outskirts of our army, who fleece the public and fatten by pretended specifics and cures, have fled from the scene of desolation, the brave soldier stands alone at his post amidst the dead and dying. When he marches to the tented field or into the battle's shock, he stands by his comrade shoulder to shoulder, strikes with him his last blow, and falls with him in his last charge. He observes the strictest discipline, obeys implicitly the martial Code and drives with scorn and contempt from his presence the plunderers and camp followers, who linger about his path. Let the honest, the brave and true-hearted members of our army, imitate this example. We, too, have a *Code of honor*, "simple in its precepts, just in its teachings, correct in its doctrine and grand in its conception;" let us follow our guidon, discarding petty jealousies and impatient longings after fame and fortune; standing together each one supporting the other, defending his brother, protecting his reputation and advancing his interest.

"Unblemished let *us* live or die unknown,
Oh! grant *us* an honest fame or grant us none."

The Senile Heart.

BY J. R. LEMEN, M D.,

Professor of Diseases of the Heart and Lungs, Marion Sims College of Medicine; Consulting Physician, Rebekah Hospital; Physician to German Hospital; Etc.

Read before the St. Louis Medical Society, December 8, 1894.

Charcot, in his lecture on Senile Diseases, says that, unlike every organ in the body except the kidney, the heart presents, even to old age, the dimensions of middle life. Cohnheim believes that the heart becomes slightly hypertrophied as age advances, if the health remains good. The conditions which give rise to hypertrophy of the heart in the aged is the greater resistance of the vascular system, but conditions may be present which will resist the action of the heart in younger life, so we must judge age by tissue changes which have taken place and not by the number of years the patient has lived. How frequently we see the signs of senile decay appearing in those who are still young in years; neither need we wait for life to be well advanced before looking for symptoms of senile heart. The normal elasticity of the blood-vessels converts the intermittent flow produced by the contractions of the heart into a continuous flow in the capillaries and, as a result, we have the normal blood-pressure or tension which varies within certain limits; but if the flow is disturbed by the greater resistance in the capillary sys-

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tem, we have, as a result, greater work to be done by the left side of the heart. As age advances this is normal or physiological, as the blood-vessels become less and less elastic. The condition may be such, however, as to produce this result in early life. The vascular changes proceeding insensibly, let the cause be what it may, either age or a defective metabolism; the blood becoming charged with poisonous material which, flushing the tissues, produces a condition similar to that of the aged; and, as a result, we may look for senile heart. If the heart slightly hypertrophies, the patient is unconscious of danger ahead; however, if dilatation begins early, we have symptoms that are exceedingly distressing to the patient, and we may have to record another death from, so called, heart failure. Long-continued dyspepsia is a well-known cause of heart weakening, by furnishing an inferior quality of blood to the myocardium; but in long-continued dyspepsia the same amount of hypertrophy does not precede dilatation, as from other causes. One of the most frequent causes of the weakening of the myocardium is an over-indulgence in rich foods, producing plethora and a crowding of the tissues with fat, which interferes with the peripheral circulation, requiring greater force from the heart to overcome this added resistance; also by derangement of the general metabolic changes in the tissues, there is an accumulation in the blood of the imperfectly oxidized product of metabolism—uric acid. The coronary arteries flood the heart with an insufficient quantity and a vitiated quality of blood and, as a consequence, we have the dilatation instead of the compensating hypertrophy. Over-indulgence in stimulants, and prolonged exertions, calling on the reserve force, may produce the same effect. Great anxiety, business worry, etc, inhibit the action of the heart and produce an increase resistance by causing the blood to dam up in the tissues and, as a result, hypertrophy of the left ventricle. When hypertrophy fully compensates for the extra work to be done by the organ, the patient is usually not conscious of the existence of the heart's weakness; but when there is an actual or relative weakness of the heart, the symptoms of distress commence. They are often first manifested by pre-cardial anxiety, the patient simply being conscious of an uneasy feeling in the region of the heart. Upon examination the pulsations are exceedingly weak, the sounds normal at this stage, with the possible exception of an accentuated second sound, which is believed to indicate dilatation of the ascending aorta. The irregular action of the heart interferes with the blood tension and does not lessen the expenditure of energy and, as a result, the heart is rapidly wearing out. The conditions become more favorable for greater dilatation that will supervene, unless measures are taken to correct the disturbance. We may also have a confusing condition present in the form of semi-systole, as a result of interference with the action of the accessory nerve, only every other beat sending blood to the peripheral arteries, so that the pulse-wave is perceptible, producing, apparently, a brady cardia when, in reality, every other beat is simply lacking in energy.

We often have palpitation as a result of senile heart, but this symptom may also be present in those who have not this disease. So, also, patients may claim that they suffer from palpitation when, in reality, they have a much more serious and significant symptom, known as tremor cardis. The difference is that in palpitation the heart beats with much more force, often perceptibly moving the chest-wall, but the beats are quite regular in rhythm, simply their number being increased; while in tremor cardis the heart will seem to almost stop beating and will only flutter, the radial pulse decreasing in force so as to be hardly perceptible. The patient, in well-marked cases, presents an anxious countenance, and is fearful that the attack may terminate life. A peculiar fact in these attacks is that they are not accompanied with fainting, the heart, seemingly, trembling while waiting for the blood to distend the cavities so that a contraction may be effective and a full blood wave may again flush the tissues.

Following tremor cordis in natural sequence is angina pectoris, as the result of still greater weakening of the myocardium. This affection may appear in early life; however, it is most common after middle life. True angina is frequently—ignorantly, as Balfour says—described as pseudo-angina, because sufficient lesion to account for the true angina is not found. When the angina is present, even if not manifested by irregularity in beat, we have the anxious countenance and sense of impending danger, although these symptoms may vary in degree. Upon examination of the heart at this time there will be found weakening of the apex impulse, and possibly the impulse will show on the mammary line or to the left of it. We find that such patients have been large eaters and have been temperate in nothing except in their exercise; occasionally have felt a slight twinge of pain in small joints about the feet; have an increasing tendency to the deposition of fat in the tissues. Upon examination the venous radicles are found engorged, the circulation decidedly interfered with. If the water is examined the specific gravity is found high, but the quantity much reduced, showing solids above normal. Possibly there is a slight quantity of albumin, and, at times, uric acid deposited from urine in quite a quantity. Or we may have a different picture presented; the patient being quite thin in flesh, nervous, irritable, suffering from nervous dyspepsia, bowels constipated, every trifle magnified, worrying about everything, the heart irregular, irritable and weak, every change in temperature disturbing the circulation, and possibly causing angina pectoris by the contraction of the cutaneous blood-vessels. The heart is weakened, being unable to stand the extra work required of it, consequently slight dilatation.

If we take into consideration the pathology of the conditions present when the above symptoms appear, and remove the cause of the dilatation, which is the lesion, we can, by diet, exercise, and medicines, at least

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secure the comfort of our patient; and if the conditions preceding dilatation have not progressed too far, we will be able to prevent the dire results which will most assuredly supervene if the pathological process is not correctly understood.

Ox-Gall in the Treatment of Typhoid Fever.

BY HENRY SUMMA, M D

Read before the St. Louis Medical Society, December 8, 1894.

During the last five months I have experimented with ox-gall (*fel bovinum*) in the treatment of typhoid fever, my attention being drawn to it by the occurrence of a rather peculiar circumstance. About the beginning of September, 1894, I had under treatment an inmate of a convent, Sister X. She arrived at the Pius Hospital on September 8, 1894, having been sick in bed four or five days at her home convent. She had been ailing several weeks previous to taking to her bed. Her illness was pronounced by her medical attendant "typhoid malaria." After a careful examination, I pronounced the case one of typhoid fever, in fact a "school case." Her chief complaint was about pain in the abdomen.

On physical examination I found the following: *Great* distention of the abdomen (meteorism); pain over the whole abdomen; there was nausea and vomiting had taken place. Was informed that patient suffered from a diarrhea, and that she had partaken rather freely of raw apples and crackers just previous to her admission. Her temperature at 1 P.M. was 103° F.; pulse, 110. At four o'clock I saw the patient for the first time, her temperature being 104 2°; pulse, 110. A cold bath was given; temperature fell to 104°, pulse remaining at 110. A moderate dose of calomel was given previous to the bath. Baths, dilute hydrochloric acid, wine and milk formed the treatment at this time.

Date.	Hour.	Temperature.	Pulse.	Remarks.
September 8	1 p m	105	110	Admitted.
" 8	5:45 p m.	104.2	110	
" 8	10 p.m	104	...	
" 9	8:30 a.m.	102	110	
" 9.	1 p m	103.2	116	
" 10	10:30 a.m	102	120	
" 10.	8 p m	103	134	
" 11	11 a m	100 4	152	
" 11	5:15 p.m	103.8	132	

During the night from the 11th to the 12th was called (at about 2 o'clock) to the hospital on account of increased distress in the abdomen. Gave a hypodermic injection of morphine and ordered turpentine stupes. Also an enema of castor oil, turpentine and soap water. The enema was expelled without giving relief, pain being but slightly controlled by morphia.

Date.	Hour.	Temperature.	Pulse.	Remarks.
September 12.	8 a.m.	104	132	Patient in every way worse. Exitus lethalis expected. At 9 a.m., patient was ordered and received an enema of fresh ox-gall, (six tablespoonfuls to a quart of warm water) with a view to relieving the bowels
" "	2:30 p.m.	99.2	140	
" "	5:15 "	99.2	128	Ox-gall enema, two tablespoonfuls to one pint of warm water.
" "	9 "	101.4	125	Ox gall enema.
" 13.	11 a.m.	99.8	120	
" "	3 p.m.	101.6	128	Ox-gall enema.
" "	8:45 "	102	124	Ox gall enema.
" 14.	11:45 a.m.	101.4	128	
" "	4 p m.	100.4	120	Ox gall enema.
" "	8:15 "	100 4	120	
" 15.	9:15 a.m.	98.2	112	Ox-gall enema.
" "	12:30 p.m.	101	120	
" "	4:45 "	99.8	120	
" "	7:45 "	101	112	Ox-gall enema.
" 16.	12:30 "	99.4	104	Ox gall enema.
" "	4 "	99.2	104	
" "	9 "	102 4	100	Ox-gall enema.
" 17.	7:30 a.m.	99.6	96	
" "	4 p.m.	99	100	Ox-gall enema.
" "	8:45 "	98.4	92	
" 18	8:15 a.m.	99	92	Ox gall enema
" "	2 p.m.	99	100	
" "	10:30 "	99.2	100	Ox-gall enema
" 19.	11:30 a.m.	96.8	96	Moderate hemorrhage from the bowels took place. Ox-gall enema.
" "	4:15 p.m.	98	190	
" "	8:15 "	99.4	112	Ox-gall enema.
" 20.	7:45 a.m.	99	100	Ox-gall enema.
" "	1:15 p.m.	98.2	100	
" "	4:30 "	99	104	
" "	8:30 "	99.2	104	Ox-gall enema.
" 21.	7:30 a.m.	98.8	104	Ox-gall enema.
" "	10:45 "	98.4	96	
" "	4:15 p.m.	99	96	
" "	8:30 "	98	92	Ox gall enema.
" 22	7:30 a.m.	98	88	Ox-gall enema.
" "	12:30 p.m.	98.2	100	
" "	3:15 "	99	100	
" "	7:45 "	97.8	88	Ox-gall enema.
" 23.	10:15 a.m.	98	88	Ox-gall enema.
" "	12:30 p.m.	98 6	88	
" "	4:15 "	98.2	96	
" "	8 "	98	92	Ox-gall enema
" 24.	7 a.m.	97.4	84	Ox-gall enema.
" "	1 p.m.	97.8	80	
" "	4:30 "	98.2	84	Ox-gall enema.
September 24.	8:15 "	97.8	81	

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Date.	Hour.	Temperature.	Pulse.	Remarks.
September 25.	7:45 a.m.	97.2	84	Intestinal hemorrhage ceased, but had continued until now. Ox-gall enema.
" "	12:45 p.m.	98.2	88	
" "	4 "	99	88	Ox-gall enema
" 26	7:30 a.m.	97.2	88	
" "	11:15 "	98.2	88	
" "	4 p.m.	98.2	88	
" "	8 "	98.2	83	
" 27.	6:45 a.m.	97.8	83	
" "	11 "	97.6	80	
" "	4:15 p.m.	98.2	88	
" "	8:30 "	98.4	85	
" 28	7:15 a.m.	97.8	85	
" "	11 "	98.2	76	
" "	4:30 p.m.	98 4	92	
" "	7:30 "	98.4	102	
" 29.	7:30 a.m.	99	102	
" "	4:30 p.m.	98.8	102	
" "	8:45 "	98.6	108	
" 30.	7:30 a.m.	97.8	108	
" "	1 p.m.	98.2	84	
October 1.	1 a.m.	98	84	

I do not wish to tire you with a further recital of the case. I can assure you that the patient progressed nicely to a full recovery, the temperature and pulse being normal or slightly above it. The ox-gall was continued up to October 1, in the quantity of two tablespoonfuls to one pint of warm water, repeating it morning and evening.

Besides this case, I have treated five others at the same hospital, with ox-gall, and about twenty others in private practice. About thirty cases were treated, under direction, at the St. Louis City Hospital, Dr. Heine Marks, the Superintendent and resident physician, having, with his usual promptness and cheerfulness, acceded to my request. I am greatly indebted to him and his first assistant, Dr. Leo Ehrlich, for valuable assistance. By the kindness of Dr. F. J. Lutz, Surgeon in Chief, I was permitted to direct the treatment of the only case then at the Alexian Brothers' Hospital, Dr. Hochdoerfer kindly volunteering to follow my suggestion. Dr. Warren B. Outten, Surgeon in Chief to the Missouri Pacific Railway Hospital, also permitted the treatment of any case which entered the hospital. Unfortunately no case was then present, nor did one present itself up to November, 1894.

Of a total of about sixty cases treated, only two deaths took place, both of them in the City Hospital, one dying from exhaustion and the other from pneumonia.

In conclusion, permit me to give the following tabulated statements, based on my experience with ox gall in the treatment of typhoid fever, in some of which I am borne out by the physiologists.

1. Bile is a normal physiological antiseptic.
2. Bile is an antipyretic.
3. Bile is a tonic to the heart's action, decreasing the number of beats, but increasing the force of the individual beat; in other words, producing a rise in the blood pressure up to a certain extent.
4. It is, in my opinion, the best remedy in the treatment of typhoid fever.
5. Bile produces increased contraction of the muscular structure of the intestine. Diarrhea, meteorism, hemorrhage are no contra-indications to the use of ox-gall in the treatment of typhoid fever.
6. It is possible that the bile of other herbivorous animals (sheep, goat) is of the same composition as ox-gall, and, therefore, has the same effects.

Thyroid Extract in Goitre.—The author states that his observations confirm the excellent effects (previously reported by others) of the ingestion of thyroidin on ordinary goitre patients. Of 12 patients thus treated, 9 were cured, or at least improved.

In all these cases use was made of an extract of raw thyroid gland (from the sheep or calf), administered in cachets or sandwiches, in doses of 6 to 10 grammes (1½ to 2½ drs.), repeated at intervals of 2 to 8 days.

Among the author's patients were four children, from 4 to 12 years old; in all of these, after 8 to 15 days, there was a considerable diminution in the size of the tumor; in four weeks the goitre was entirely gone. In the fifth case—a goitre with a cyst—the ingestion of thyroid extract caused the complete disappearance of the parenchymatous part of the tumor; the cyst, however, resisted the treatment. With this patient, the circumference of the neck decreased 7 cm. (say 3 inches).

The sixth case concerned a man who had been afflicted since 6 years with a goitre of the size of a child's fist, on the rights side of the neck, and causing a displacement of the trachea and an obstruction to respiration. After four weeks' treatment, the respiratory disturbances ceased; the swollen lobe of the thyroid resumed its normal consistence and dimensions, and the circumference of the neck had diminished 5 cm. (2 inches).

Finally, with three other patients, goitres as large as an orange diminished in size under the ingestion of thyroid extract.

The three cases not benefited by this treatment had already reached the stage of cystic or colloid degeneration when they came under this treatment. The remedy, it is said, was always well supported, excepting in one case.

The author thinks that the phenomena of intoxication may be avoided by administering the thyroid extract once every 8 to 10 days only and in doses not exceeding 10 grammes (2½ dr.) for adults and 5 grammes (1½ dr.) for children.—Dr. P. Burns, in *Sem. Med.; Am. Med.-Surg. Bull.*

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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DR. F. J. LUTZ, General Surgery.
DR. W. B. DORSETT, Gynecology and Obstetrics.
DR. E. C. RUNGE, General Medicine.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 914 Locust Street, St. Louis.

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The Merry Medical War.

Every time the word "War" is mentioned look out for our friend Isaac Love. We honestly confess, that we are slightly afraid, lest we should miss his involuntary contributions to medical wit and humor for some time to come. After a man is sat down upon vehemently, forcibly, effectually and definitely, as Dr. Isaac Love and Company was at the annual election of officers of the St. Louis Medical Society, it is to be expected under ordinary circumstances and with normally constituted individuals, that he feels sore and peaceably disposed. Not so with a jack in the box; not so with our genial contemporary. He is made of elastic material.

We are glad to see from an interview published by the *Chronicle* of January 9, 1895, that our fear was groundless. Dr. Isaac Love will continue to contribute to the amusement of the medical and the layworld as he has done heretofore in such a successful and commendable manner. This at least is his promise made to a reporter of the *Chronicle*, viz.:

"Dr. I. N. Love, who edits *The Medical Mirror*, was seen and said: 'The editorial in question' (meaning our editorial of January 5) 'is intended to be a song of triumph over the election of Frank D. Mooney President of the St. Louis Medical Socity, and the defeat of Dr. G. Wiley Broome. A large part of it is devoted to sarcastic references to the alleged supporters of Dr. Broome, in which names are not mentioned although their identity is plainly indicated. For instance, the defeat of Dr. Broome is characterized by the stale joke, 'Love's Labor Lost.' The fight over the election is called a college question, and a thinly veiled slap at Dr. A. C. Bernays is indulged in. A physician is called a 'student catcher by hook and crook,' and the statement is made that he is in bad odor because the Medical Society closes its doors to him. Altogether, even to the casual reader, the venom in the editorial is apparent.

'In the next issue of *The Medical Mirror*, I propose to say a few things on the other side. I propose to show up the crowd who are inspiring those editorials in the REVIEW. Of course we all know that Dr. Frank J. Lutz is at the bottom of the whole thing.

'In my article, I will show conclusively that in that memorable election, when Lutz defeated me by one vote for the Presidency of the Society, that he was not elected, notwithstanding his method of running the election. Of course this fact was proven at the time, but I had evidence come to me since which will paralyze the St. Louis Medical Society, I am going to expose Lutz's ingratitude for Bernays, to whom he owes his election at that time, etc.'"

Like the little boy that has been whipped in a street-fight he looks around at the crowd of bystanders and perceives someone smiling. Forthwith he rushes at him or—threatens to get even with him. We do not know, whether Dr. Lutz, who, according to Dr. Isaac's promise, is to be treated with a thorough roast in the next number of his *Mirror*, actually has been one of the boys smiling at our innocent bouts with our colleague of the *Mirror* in which the latter came out second best. But he is certainly mistaken as to Dr. Lutz's responsibility for the editorials, which have appeared in the REVIEW in times present and past. Dr. Riesmeyer is the responsible party, and none other. Grievances, if there should be any, should be lodged and filed with him.

To the forthcoming roast we look forward with pleasurable anticipations. We shall observe a strictly neutral attitude during this duel, like the umpire, hand on the hilt of the sword. We are, however, very much alarmed about the health of the members of the St. Louis Medical Society, for Dr. Isaac Love threatens in the interview to paralyze that body. For goodness' sake, doctor, don't do that!

***

Another gentleman, whose name to our great astonishment we had not seen in the daily papers for two days, has also bobbed up in the interview, and thus relieved our anxiety which we began to feel on his behalf. He is the next best friend of Dr. Isaac Love, and too little appreciated by the medical profession. He calls the REVIEW a horse journal, and threatens to send a check for the advertisements which he receives in the REVIEW.

Send the check, doctor; don't be bashful about it, and we promise you that we shall invest it in your valuable

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infallible antidiphtherine, which much against your will was advertised in the daily press. We are very desirous to make its acquaintance, for from the description of the process of manufacture, it must be a wonderful remedy.

***

The next applicant for duelistic honors is Dr. Broome. He too has appeared on the scene of medical war journalism and has ascertained at the REVIEW's office, that the editor did not write the editorial above alluded to, but that one "Jerry Sneak" did the job. For the present, we think, that we can dispense with the good offices of this gentleman, but will call on Dr. Broome for an introduction to him, in case our pen should run dry.

A Timely Admonition.

"We are bound in all honesty to admit that those physicians who are most apt to be seen by newspaper men are but too often innocent of the training of educated gentlemen, however able they may be as physicians. The newspaper men knows them, as they look to him for free advertising. They wear out their shoes visiting the reporter's quarters. They ventilate their views before the public on all occasions, whether they have any adequate knowledge of the topic or not. Having bullied helpless sick people, ignorant withal, they think the same tactics adequate for their dealing with other people.

"It is hard to find a general remedy for this evil—this discredit to the profession. The sifting process must begin early—the earlier the better. All that the profession can do in this direction is to guard against cheap diplomas by securing a preliminary requirement of college training; and further to use such quiet and persistent moral means as may be at command to convert their erring brothers to better ways of thinking."

It strikes us that the above passage, which we have clipped from the *American Lancet*, will be very profitable reading to some of the members in the rank of the St. Louis medical profession. The picture drawn fits them to a dot. We are confident that those whom we have in mind and who find that this cap fits them, will cut these lines out and paste them in their hats.

The Medical Profession in Texas is not a unit, if we may be allowed to form a conclusion from a perusal of the pages of the *Texas Health Journal*. In the issue for July Dr. Cunningham has an article with the vigorous title. "The Amazing Infatuation of the Texas State Medical Association in Pompously Parading Its Appalling Ignorance of the First Principles of Sanitary Legislation; and Its Unbounded Cheek, and Unmitigated Gall in Presuming to Instruct Congress in the Proper Performance of Its Duties—Succinctly Set Forth.—*Med. Record.*

BOOK REVIEWS

Diagnostic Neurology—A Manual of Diagnostic Neurology for Practitioners and Students. By ALEXANDER B. SHAW, M D., Professor of Diseases of the Mind and Nervous System, and of Clinical Neurology, Beaumont Hospital Medical College, etc. St. Louis: S G. Burnham, Printer. J. H. Chambers & Co., 914 Locust St. Price, $1.25.

A growing interest in the study of nervous diseases is in no way better shown than by the increasing number of publications of various kinds devoted to the subject. It has not been many years ago since one undertaking to inform himself in a general way on diseases of the nervous system found—in this country especially—comparatively few works of a systematic kind to pick from. Now they are so numerous that he finds some hesitancy in making a selection. Amongst these many authors we find quite a number of Americans taking place with full fledged text books on neurology, to say nothing of numerous monographs that have recently appeared.

And now we have before us for formal review another American book, not from the East where most of its predecessors have hailed from, but from St. Louis, which to the East, no doubt, seems a long way west for the birth of a medical text-book. However this neat little work bears only the modest title of Diagnostic Neurology. We have long felt that the East or some other locality should produce a work worthy the title covering this ground. We have believed that such a work would stimulate the efforts of general practitioners and students to a more adequate study of the neglected subject of nervous diseases, the desirability of which is peculiarly patent to the neurologist. We therefore feel that the author has undertaken a very laudable task. Yet it is a difficult one. This fact no doubt has deterred others from attempting it. In order that any intricate subject may be opened up to the learned, that the most advantageous light may be let in most opportunely here and there, that complicated formulæ may be reduced to their most tangible forms, that the attractive features may always properly appear needs, first, a thorough knowledge and, secondly, a gift of ingenuity, and the latter especially where condensation is required. Neurology is intricate. We all know it, but it is very important, vitally so. Therefore we cannot neglect it. We must learn it. Whoever tries to teach it has our sympathy. That the author has made an honest trial in this work we are convinced. We are not going to stereotypically congratulate him on having succeeded in a remarkable degree. We do not believe any one could in a book of a hundred pages. Yet we do believe he has made, with his hundred pages, a very useful book, in which the reader will find many hints and suggestions

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which will make it a valuable possession in studying nervous cases and the subject of neurology. F.

Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry, Physics and Hygiene in the University of the City of New York, etc, and TRACY C. BECKER, A.B., LL.B., Counselor-at-Law and Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. In four volumes. Volume II. Large 8vo, 751 pages, illustrated with wood-cuts and three plates, two of them in colors. Price, in muslin, $5.00; in brown sheep and in law style, $6.00 per volume. Sold by subscription only. St. Louis: J. H. Chambers & Co., 914 Locust St.

This work is already well known to the profession as a book of reference and is highly valued for its completeness and excellency. All the articles of volume two, like those of the first volume, are written by representative men, specialists in the respective branches upon which they write; and no efforts have been spared to make the work complete, practical and comprehensive. It is illustrated throughout by dark and colored illustrations wherever they are useful in elucidating the subject. The type is large and clear; the binding good. The book will prove to be of the greatest interest and value to the practitioners and students of medicine and law. The following chapters with the author's names attached are an illustration of the practical nature of the work:

Examination of Blood and other Stains, by Edw. S. Wood.

Examination of Hair, by Edw. S. Wood.

Abortion and Infanticide, by J. Chalmers Cameron.

Determination of Survivorship, T. C. Becker and J. Parmenter.

When Medical Examination of the Living is Permitted or Required by Courts of Law, by T. C. Becker.

Pregnancy, Labor and the Puerpural State, by J. Clifton Edgar.

Sexual Incapacity, by Irving C. Rosse.

Rape, by J. C. Edgar and J. C. Johnston.

Unnatural Crimes, by Irving C. Rosse.

Railway Injuries, by W. B. Outten.

Simulated Diseases, by W. Thornton Parker.

Photographing the Womb.—A Swiss physician has described a method of dilating the uterus by means of tents, so that by the use of a mirror a perfect view may be obtained of the interior of the organ. Not content with this, however, he is unselfish enough to desire to obtain photographs of the uterine interior in various diseases of the organ. The future of woman is sad indeed if now her womb must not only be felt of, sounded and measured, but photographed as well.—New York *Polyclinic*.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated meeting, Saturday evening, December 8, 1894, the President, W. B. OUTTEN, M.D, in the chair.

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DR. A. H. MEISENBACH presented a specimen obtained from a case of "Strangulated Femoral Hernia," occurring in a man, 45 years of age; an omental hernia having existed ten years. The bowel descended into the sac on the night previous, after the patient had eaten a hearty dinner. The loop became incarcerated, which was followed by the usual symptoms of colicky pains, radiating down the right groin, and vomiting at frequent intervals. Taxis was performed at once, but the hernia could not be reduced. Speaker saw the patient on the following morning at ten o'clock, when the temperature and pules were normal and pain had almost ceased. Vomiting had occurred for the last time three hours previously. The tumor had not diminished in size, however, being about as large as a large man's fist.

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The operation was done two hours later. Great care had to be exercised in cutting down upon the sac on account of the unusual thinness. A constriction was found external to the sac in the saphenous opening. This was nicked and the sac liberated at the neck. The bowel could not be returned into the abdominal cavity, however, and upon opening the sac a marked constriction was found internally. This was released with great difficulty, but the bowel—a knuckle about 1½ inches in its long diameter—was very much congested. The application of warm cloths for some time caused a gradual disappearance of the lines of demarcation, whereupon the bowel was returned into the abdomen, the prolapsed omentum tied off, the sac cut away and closed by a continuous, buried, catgut suture. The saphenous opening was closed by several rows of like sutures, and the stump of the sac brought into close contact with the closed ring by firmly tying the long ends of the sutures which had been left for this purpose.

The patient is doing very well, the pulse never going above 76, nor the temperature above 99 5°.

The reasons for presenting this specimen were to call attention to the comparative rarity of femoral hernia in the male as compared with other varieties. Also to emphasize the necessity of opening the sac in every case, owing to a possible internal constriction. Then the time of operation is very important, delay often being responsible for a fatal result. It is questionable whether taxis ought to be done in these cases. No matter how

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carefully it may be performed, great harm will come from manipulating a crippled bowel.

***

Dr. Robert Funkhouser presented specimens from a case of "Diffuse Suppuration of the Mesentery, and Multiple Abscesses of the Liver." The patient from whom the specimens were obtained post mortem was 31 years of age, and was struck on the abdomen with a piece of iron three years ago. He was unconcious after the injury, and was confined to bed for some time. About five or six weeks ago he was taken with a fever, accompanied by ichterus. Three weeks ago he passed seven gall stones, the largest about the size of a pea, and a day later some pus by the bowel. The patient was very much emaciated, had repeated chills and a temperature which rose to 104° at the highest.

Examination, conducted by Drs. Pezolt, Gillis, Ussery and the speaker, revealed general abdominal tenderness, which was particularly marked over the gall bladder, however. Enlargement of this organ could not be determined owing to the general abdominal distension. Several tumors, about 2½ inches in diameter, were found surrounding the umbilicus, and another immediately underneath these, but completely separated from them.

Laparotomy was decided upon but proved of no benefit, as the abdomen was closed immediately when the true condition was recognized. The small tumors around the umbilicus were opened in making the abdominal incision, and were found to contain pus. The intestines and mesentery were found adherent to the umbilicus and were very friable, resulting in considerable hemorrhage which was checked with difficulty. An abscess of considerable size was found in the hypochondriac region, to the left of the spinal column, and lying directly over the artery, a condition which gave rise to marked pulsations simulating an abdominal aneurism, and would have been diagnosticated as such if the bruit had not been absent. The abscess was opened and a large quantity of thick fetid pus evacuated. It extended upwards towards the liver, but no connection with that organ could be determined, the cavity ending in a blind sac. Lower down another similar abcess was found which was also opened. No further attempts to relieve the condition were made. Drainage was established by gauze packing and the abdomen partly closed up. The patient's temperature fell to normal, and he seemed to improve for a time. The operation was performed at one o'clock, on Monday, and the patient died, as expected, Tuesday morning at half past six.

A post mortem examination was made by Dr. Ussery. The mesentery was found filled with small abcesses, which were opened with very small incision with the knife and when it was stripped from the bowel. The liver, too, was found filled with abscesses, varying in size from that of a pin head to one holding an ounce or more. These abcesses did not seem to have followed the hepatic vein, but were situated along the hepatic artery, the duct and the portal vein. The lobus quadratus is freer from them than any other portion of the liver, while the lobus spigelii is filled with them. The urachus and round ligament were very much swollen and infiltrated with pus, and were easily felt diverging from the umbilicus before the abdemen was opened. The gall-bladder contained septic bile, but no pus. The duodenum seemed to have undergone some disorganization. The spleen was normal, not even friable. The kidneys were congested and were lobulated, as in the fetal state and in lower animals. Examination of the pus disclosed the streptococcus, the staphylococcus and what seemed to be tubercle bacilli.

The point of greatest interest is the origin of these multiple abcesses. They were undoubtedly due to a general septic infection, pyemic in character, the infectious material having been carried directly from the mesentery through the veins, which go to make up the portal vein, to the liver.

Speaker was inclined to think thas this infection was due to the injury received some years previous; that the pus was forming for some time and that the gall-stones played no part as a causative factor, but were to be considered merely as a coincidence.

Dr. Meisenbach differed with Dr. Funkhouser as to the origin of these abcesses. It is proved that conditions, such as existed in this case, may be produced by gall stones. A catarrhal condition is produced at first, which assumes an ulcerative character, when the infection is carried through the hepatic vein and cystic duct, by way of the heart, through the lungs, and then from the left side of the heart to the mesentery. Thrombi are formed and the multiple abcesses are produced. Tavel, of the University of Berne, in a recent and excellent work on the character and source of peritonitis, describes a form identical to that met with in this case; namely, where an infection came from the gall-bladder.

The treatment in cases of this kind should be the same as that instituted for intestinal perforation accompanying typhoid fever. The abdomen should be opened freely, the septic material removed and the cavity packed with iodoform gauze, instead of closing it firmly. He did not think, however, that any kind of an operation would have been of avail in this case.

Dr. Funkhouser said that it was impossible to expect anything from packing in this case, although it was introduced to check bleeding. The liver was honeycombed with abcesses, pus pouring out of the duct and the latter portal veins being isolated by the ulceration which occurred around them.

***

Dr. J. R. Lemen read a paper (see page 44) entitled,

The Senile Heart.

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Dr. I. N. Love said that "a man is as old as he feels, and a woman is as old as she looks." The elasticity of youth in old age, so frequently referred to, is found in those who have led temperate lives. Intemperance, not so much in drinking, but in eating, is the chief cause of

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premature senility, or brittleness of the arteries. Speaker thought that we all eat too much, that most of us could get along with half the quantity of food. We should impress our patients with the necessity of less food and more elimination. Over-feeding is the most fruitful source of Bright's disease, diabetes and neurasthenia.

Dr. Bransford Lewis called attention to a little note in a recent work on physiology, which had a bearing on the subject of atheromatous arteries. It was in connection with certain advocates of vegetarianism, who had followed the regime of dietary for the purpose of doing away with the over-production of uric acid. Some observers noticed an atheromatous degeneration before they reached the age of forty, and this observation was confirmed by others who had followed a strictly vegetable diet.

Dr. H. C. Fairbrother thought that the heart is the first organ to wear out. One result, in particular, is liable to take place; namely, a thinning of the walls of the ventricle. That is one of the conditions of a senile heart, and is frequently the condition found in sudden death. Organs in this state are very readily affected by the sympathies toward which modern education tends, and lead to death from so-called broken heart. He had recently seen a plate in a work of pathological anatomy, illustrating the heart of an old lady, 86 years of age, who had died suddenly and in whom there had occurred spontaneous rupture of the heart.

Dean Swift referred to these impressionable hearts in a poetic sense upon hearing of the death of a very old man, when he said, "If he had had the right kind of a heart he would have died long ago."

***

Dr. Henry Summa read a paper (see page 46) entitled,

Ox-Gall in the Treatment of Typhoid Fever,

a remedy based on physiological principles.

***

Dr. Ludwig Bremer considered the remedy which the essayist hit upon as in keeping with the progress of the times, and of the modern view of animal therapeutics. The cases which the doctor related make a very favorable showing, but we must bear in mind that other methods and drugs have made a very favorable showing before, so that we must accept everything in that direction with circumspection.

Typhoid fever treatment has had its ups and downs just as the diptheria treatment; there have been methods and drugs recommended from time to time which seemed to have a remarkable effect during an epidemic, and in the hands of one man, and failed in the next epidemic or in other hands. The cold water treatment has met with remarkable results in the hands of some, and has failed and produced dangerous results with others. The symptomatic treatment, which is exemplified in the lowering of the temperature, we have witnessed within the last few years when the coal tar products had their day, and when no disease seemed to exist that was not treated with some of them. This treatment has been very properly abandoned, because it has been demonstrated that a great many deaths resulted from heart paralysis as a result of it. By reducing the temperature you establish a very low state of the system, impoverish the blood and by taking away something here you add something there.

Referring to the remark that the case had been diagnosticated as typho malarial fever, speaker said that he had hoped that that term would be dropped from the nomenclature in connection with typhoid fever. It seems ineradicable, although it has been established to the satisfaction of every competent pathologist that there is no such thing as malarial typhoid fever. The statement is made whenever there is an atypical case of typhoid fever; that is, where there is a sudden great rise in temperature, or a chill and periodicity. These cases are rare here, but occur more frequently in Germany.

The remedy suggested by the essayist was used a great deal in olden times, and is especially mentioned in German literature. It was a favorite remedy for constipation and has been administered internally. Speaker had seen some wonderful results from its use in hysteria, but could not ascertain whether the effect was due to suggestion or to its action on an affected heart.

In explaining its action in typhoid fever we should remember that cattle are not subject to the disease—at least, not that sort which man acquires—and the gall probably acts much in the same way as antitoxine does in diptheria. By injecting the gall into the bowel of man it is brought in contact with physiological secretions and is, in all probability, absorbed in part. It passes into the blood and there destroys those bacteriological products which have been manufactured by the typhoid bacilli, and have given rise to the fever and other disturbances.

The speaker suggested the possibility that out of such substances antitoxine might be manufactured in future, without resorting to the immunization of animals. Observations of this kind may lead to the proper action in this direction, and he hoped that the remedy may prove efficacious in the hands of others and that future experiments may demonstrate its true value.

Dr. Kieffer thought that the results in cases of typhoid fever have been very much better where they were treated with antiseptics early, before the family had used quinine. His results have been better where he has used calomel liberally, producing a condition of asepsis of the alimentary tract.

Dr. W. H. Ford said that in typhoid fever we have to deal with a persistent continued fever, which in many respects partakes of a septic febrile movement. This septic condition evinces a tendency towards a pyemic one. Where does the primary sepsis occur? It is now the general opinion that the febrile movement is secondary to absorption from the alimentary canal; what the primary cause may be, or the conditions originally existing in the intestinal canal, we do not know. Peyer's

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patches are absorbent centers; they are well known to the lymphatic system. One of Peyer's patches is nothing but an aggregation of elementary lymphatic glands. It is reasonable to suppose, therefore, that they will absorb septic matter, the result of intestinal putrefaction. The transference of such matter by these glandulæ from the small intestine into the blood, produces a fever of corresponding character. Nature evidently attempts, by a reactive movement, to expel, by diarrhea, such toxic matters; but she is unable to do so, altogether, because new material accumulates continually as the gland patches inflame and ulcerate.

In the treatment of typhoid fever, we have, therefore, to bear in mind this condition of the intestines; the presence in them of septic secretions by whose entrance into the blood a fever is maintained, which necessarily exhausts the nervous and muscular forces. Treatment, therefore, should be based on these facts.

As long ago as July, 1876, in a communication to the New Orleans *Medical Journal*, speaker affirmed very distinctly that the fever of typhoid fever was based upon absorption of septic matter from the bowel ulcerations. In 1875 he treated two cases reported in the same journal, where bismuth and calomel were given; the bismuth especially was used as an intestinal antiseptic. It was not until 1879, that Bouchard read his paper on this subject at the International Congress at Geneva. Speaker had had a great many cases since, mostly treated in the same way and with very good results.

There are various grades of typhoid fever, some very mild and some most malignant. Year before last a mild form, for the most part, was prevalent in St. Louis, and some of our doctors had unusual success, losing only those cases in which death was inevitable; we all lose just such cases.

How bile, administered by enema, can be of benefit in this disease, speaker said he could not understand. It may communicate to the blood a certain degree of antiseptic power, and so counteract the general febrile movement. This may be possible, but we do not know that it is so. Yet he did not wish to condemn the treatment detailed by Dr. Summa. There may be germs of truth in it, and all such unnoxious experiments are in a most praiseworthy direction, and are greatly to be commended and encouraged.

ABSTRACTS

MEDICINE.

The Treatment of Endometritis. — The treatment of inflammation of the uterine mucous membrane is as important as its prevention, and much more difficult. Intra-uterine medication as ordinarily practiced in the physician's office is useless; more frequently it is positively harmful. It is the experience of every gynecologist that many of the cases which come to him with pelvic inflammation give a history of painful intra-uterine medication at their physicians' office extending over a period of months, perhaps, the patient's condition meanwhile steadily getting worse. The dirty uterine sound and intra uterine medication have caused more serious disease in women than the condition for which the treatment was given would ever have produced.

In the treatment of these cases we should not forget constitutional conditions which may cause some of the symptoms which we are apt to ascribe to local disease. Tonic treatment will do much for these. I have seen several malarial subjects with profuse uterine catarrh entirely cured by anti malarial treatment.

True endometritis is best treated by thoroughly dilating the cervical canal, removing the diseased membrane with the sharp curette, and thoroughly disinfecting the cavity, which may then be packed with iodoform gauze to insure good drainage. In spite of all that has been written against dilating the cervix and uterine cavity, provided there be no extensive disease of the uterine appendages the operation is as safe as any in gynecology, if done with thorough antiseptic precautions, with thoroughly disinfected tents. A laminaria or tupeo tent can be rendered aseptic. Endometritis cannot be treated successfully in any of its forms without good dilatation of the cervix as a primary step.

Prevent puerperal infection by practicing antiseptic midwifery; discourage attempted abortions on the part of your patients; have your patients' lacerated cervices and perinei repaired before they lead to diseased conditions; build up your female patients' general health; do very little or no intra-uterine medication; cure their endometritis, whether due to gonorrhea or other causes; correct displacements, if there be no chronic tubal or ovarian trouble or adhesions—and you will prevent much of the pelvic disease for which hundreds of capital operations are done every week.—C. C. Frederick, M.D., in *American Journal of Obstetrics.*

Immunity, Natural and Artificial.—The recent development of our ideas regarding immunity is traced in an interesting paper by Buchner, read before the Eighth International Congress of Hygiene and Demography at Buda-Pesth (*Munch. Med. Woch.*) in which the essential difference between the natural immunity of certain animals to bacterial influences and the immunity artificially conferred by experiment are emphasized. The elaborate argument embodying the results of the investigations of the past three years is summed up in the following conclusions:

1. The natural power of resisting infection, the so-called natural immunity, depends upon distinctly different conditions and causes from the artificially induced immunity. They are, therefore, essentially different conditions, which, from the scientific standpoint, should

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be kept quite distinct from one another, and investigated each for itself, although practically they may be coexistent in the same individual.

2. Natural immunity depends, on the one hand, on the bactericidal action of certain substances in solution in the organism, the so called *alexiens*, or, on the other hand, on an inherited insusceptibility of the tissues and cells of the body to the several bacterial poisons. This natural immunity cannot, as a rule, be transmitted to the body of another animal by means of the blood.

3. The leucocytes play an important role in the protection of the body by natural immunity, not as phagocytes, but through the action of soluble substances secreted by them. Phagocytosis is only a secondary function.

4. Artificial or acquired immunity depends on the presence of modified specific bacterial products, the so-called antitoxines, either in the blood, in the tissues, or in both. By transfer of the blood these specific antitoxines can be transmitted to another organism, thereby conferring upon it artificial immunity.

5. The action of the antitoxines does not depend upon destruction of the specific bacterial poisons by contact with them, but occurs only in the animal body and by its participation. By the presence of the antitoxines a lower degree of susceptibility of the living cells of the body to the specific toxines of the bacteria is in some way induced, thereby rendering the body as a whole resistant to the action of those poisons.—*Amer. Jour Med. Sci.*

Further Studies on Indicanuria.—To complete our review of the literature bearing upon the value of the so called Hochsinger's sign in tuberculosis of children (see *Am. Jour. Med. Sci.*, October, 1894, p. 492) reference must be made to two recent publications.

Gehlig (*Jahrbuch f. Kinderheilkunde*) gives the following conclusions based upon a considerable number of observations upon children both sick and well:

1. Nurslings in good health or children fed upon sterilized milk, and not the subjects of digestive troubles, sometimes present a trace of indican in the urine.

2. If digestive disturbances occur almost always some indican is found, its quantity varying with the gravity of the affection. In chronic catarrh of the intestine, cholera and typhoid fever it is particularly marked.

3. In older children without digestive trouble the urine normally contains indican. If the diet includes a high proportion of nitrogenous food (eggs, meat), indican becomes more abundant.

4. There exists no relation between tuberculosis and a more or less marked indicanuria.

Cima ("Transactions International Congress of Rome, 1894) gives the results of examinations in sixty-eight cases. Most of these children were fed simply on bread and milk, some on bouillon, vegetables and eggs, and others on mother's or cow's milk.

1. Cases of clinically declared tuberculosis of abdominal or thoracic organs—ten cases. Almost all had some irregularity of digestion, and the stools were mostly liquid or semi-fluid. In ninety-nine analyses sixty-nine, or 69.69 per cent, gave positive reactions, while medium or very marked reactions were given in nearly half, or 45.5 per cent. In these same cases very marked reactions were obtained after some days of feeding upon a diet richer in albuminoids, or during constipation. On the other hand, the reaction was slight or feeble when the children were put upon milk or had liquid or semi fluid stools.

2. Cases suspected of tuberculosis, with adenopathy, chronic catarrh of intestines, or intermittent catarrh of bronchi—twenty-three cases. In seventy-three analyses, 75 34 per cent positive reactions, or 46 57 per cent of medium or marked reactions.

3 Cases of divers acute and chronic diseases—thirty-five cases. In eighty eight examinations thirty-eight were without reaction, while 30 per cent of medium or marked reaction were given for the most part by children over two years of age nourished on a mixed diet.

The conclusion from these results is that the indican reaction in the urine is more positively connected with anomalies of digestion, especially in mixed feeding, than with the principal malady. Consequently indican has no other diagnostic importance than that of indicating the degree of decomposition of albuminoid substances in the intestines —*Amer. Jour. Med. Sci.*

Hydrogen Dioxide. H_2O_2.—This remarkable liquid which contains the greatest percentage of oxygen of any compound known, was, for sometime, considered as a mere solution of oxygen in water, and consequently was called oxygenated water. It was afterward obtained free from water and found to be a definite chemical compound of hydrogen and oxygen, and differing from water in containing twice as much oxygen. In this state it is a heavy, oily liquid, readily decomposing at ordinary temperatures, but if heated, with explosive violence, being converted into ordinary water and oxygen gas. When poured into water it sinks, being nearly half again as heavy as that liquid, but is miscible in all proportions with it. It has a somewhat bitter, astringent taste and is colorless, transparent and without odor. It contains 94 per cent of oxygen gas by weight, and will yield 475 times its volume of that gas. It bleaches the skin, hair, ivory and destroys organic coloring matter, pus and all organisms with which it comes in contact by liberating oxygen gas in a nascent or active state. It is resolved into oxygen and water by certain metals, such as gold, platinum, silver and mercury in a state of fine subdivision, although the metals themselves undergo no change whatever. If the oxides of these same metals are brought into contact with it, not only does the hydrogen dioxide lose oxygen and become water, but the oxides lose their oxygen and are reduced to the metallic state, thereby evolving an additional amount of oxygen.

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Strange as it may appear, with all its energetic oxidizing action, it has no effect on phosphorus, a substance which is so readily oxidized by the air.

The preparations found in commerce are only solutions of this compound in water, and sold in different degrees of concentration or strength, rated by the number of volumes of oxygen gas they can be made to yield. A fifteen volume solution is one that will give off fifteen volumes of gas from one volume of the solution. A ten volume solution will yield ten pints of oxygen gas from one pint of the solution, and so on.

These solutions, although more stable than mere concentrated preparations, nevertheless decompose and lose their nascent oxygen on which its powerful antiseptic powers depend, and consequently we find the commercial brands varying considerably from their reputed strengths. The solution I find containing the greatest percentage of available oxygen is the preparation known as Marchand's, which, when perfectly fresh, is about a fifteen volume solution.

There are quite a number of different methods of preparing aqueous solutions of this interesting compound besides the original method of Thenard, the discoverer. Usually, however, barium dioxide in the hydrated state and purified from all foreign matter, is decomposed by such acids as will make an insoluble compound with it. The United States Pharmacopeia has adopted this compound under the official title of Aqua Hydrogenii Dioxidi, gives a process of preparing it and describes it as a slightly acid aqueous solution of hydrogen dioxide, containing, when freshly made, about 3 per cent by weight of the pure anhydrous dioxide, corresponding to about 10 volumes of available oxygen. It is made by the action of phosphoric acid upon barium peroxide. It must be borne in mind that it is essential to employ a small amount of free acid to preserve these solutions, but if too large a quantity it would be a source of irritation when applied to denuded surfaces and inflamed mucous membranes, and consequently, officially, a preparation requiring more than 0.5 c.c. of volumetric caustic potash solution to neutralize .50 c.c. of it, does not come up to the U. S. P. standard.

Of the various brands of commercial dioxides I have examined, I find Marchand's to be the one which yields the largest amount of available oxygen under all conditions of exposure, and the one which contains the minimum percentage of free acid. All the marketable articles I have seen are free from barium compounds, but the majority do not come up to the 15 volume standard, but are 6, 8, 10 and 12 volume solutions.

In addition to its medical uses, hydrogen dioxide can be employed to detect blood, in conjunction with freshly prepared tincture of guaiac. Although tincture of guaiac turns blue with a variety of substances, blood is not one of them. So in testing for a stain—say on clothing—moisten the spot with water, and afterwards apply a piece of white filter paper; the slightest straw-colored stain on the paper suffices. Now, add to the spot on the paper a few drops of the guaiac tincture—no coloration. Add a few drops of solution of peroxide, when instantly the spot turns of a deep azure blue. Of course if the spot turns blue by the guaiac alone, it can not be due to blood, yet it is possible blood may be present with some other substance which has that property, and hence the employment of peroxide, in that case, would be a source of fallacy. If there is no blueing by guaiac and peroxide together, then absolutely no blood is present.

Hydrogen dioxide can be determined quantitatively by permanganate of potassium solution acidified by sulphuric acid, and the quantity of oxygen gas evolved measured in an instrument called a nitro-meter, and calculated for normal pressure and temperature. One-half the oxygen evolved comes from the dioxide and the other half from the permanganate solution.

Another method, and the one commonly employed, is to add a volumetric solution of permanganate of potassium from a burette to a measured portion of the hydrogen dioxide solution, diluted with water and acidulated with sulphuric acid, until the permanganate solution is rendered colorless, and then a few drops more of that reagent employed till a permanent faint pink coloration is given to the dioxide solution to indicate the completion of process. A slight calculation will give the strength of solution. There are other methods, but the two indicated are the best.

A solution of peroxide of hydrogen is usually tested by pouring a drachm of it in a clean test tube, together with an equal quantity of ether, then pouring into the tube a few drops of bichromate of potassium solution, and shaking the tube, when the ethereal layer will become of a beautiful azure blue color, due to the formation of perchromic acid which dissolves in the ether.

To a few drops of nitrate of silver solution, add aqua ammonia enough to precipitate the oxide of silver, then add hydrogen peroxide when finely divided metallic silver separates. A solution of titanic acid in oil of vitrol and diluted will yield a yellow color when added to solutions of the peroxide.—L. D. Kastenbine, A M., M.D., in *Louisville Medical Monthly.*

The Influence of Atropine Upon Respiratory Volume.—Dr. Alfred Levison (*Berliner Klinische Wochenschrift*) declares that the effect of atrophine upon respiration is to make it hurried, to increase its size, and to make it spasmodic. Morphine opposes this action. He quotes at some length and with approval the paper by Wood and Cerna on morphine and chloral as respiratory depressants, and atropine, strychnine and cocaine as respiratory stimulants. Three points, he thinks, need further study:

1. How is the respiratory volume affected when small doses of atropine are brought directly in contact with the respiratory center?

2. How is the respiration affected when morphine and atropine pass simultaneously into the blood?

3. How is the respiratory volume affected after the administration of atropine when the vagi are cut?

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Vollmer has already referred to the first point, and Levison has confirmed his results by injecting atropine into the carotid. There was a marked and immediate increase of the respiratory volume depressed by morphine. This increase was not maintained at its greatest height, but remained always and for the most part considerably above the point at which it was when the atropine was administered. A primary fall, such as is observed when atrophine is injected under the skin, was never observed; hence it is assumed that such a fall is due to an action upon the peripheral endings of the vagus in the lungs,—a partial paralysis, which is more than compensated a few minutes subsequently by a central action.

2. Two rabbits of the same litter and about equal weight received, the one morphine alone, the other morphine and atropine. The stronger rabbit received .02 morphine, the weaker .02 morphine and .04 atropine in a vein; proportionately, therefore, more morphine than atropine. In one and a half hours the respiratory volume in the animal which recieved only morphine had reached only a third of the initial, whereas in the other animal, which recieved morphine and atropine, the initial number was already reached. Therefore there is here again a clear proof of the antagonism of both alkaloids, when atropine is not given in absolutely poisonous dose.

3. After section of one vagus, the respiratory volume depressed by morphine was raised, but depressed after section of the other vagus. If now, as in both the first experiments, the atropine be injected into a vein, spasmodic respiration, from the intense irritation of the atropine upon the respiratory center, appears, and the respiratory volume sinks for a moment, but quickly rises again.

Levison maintains:

1. There results from experiments on animals the possibility that atropine in moderate doses is of value in morphine-poisoning in men, the respiration being raised in frequency.

2. This rise is the result of an irritation of the central organ in the brain.

3. The improvement of the heart's activity through atropine is likewise of therapeutic significance.

4. The exciting action even of moderate doses of atropine can easily become paralyzing if it passes directly into the blood.

Levison concludes his paper by referring to reported cases in which atropine had been of service in opium-poisoning.—*Therapeutic Gazette.*

The Respiratory Complications of Varicella.—Boucheron (*These de Paris*, 1893) devotes an inaugural thesis to a study of the little known respiratory complications of varicella. These, with nephritis, gangrene, multiple hemorrhages, and infectious rheumatism, go to modify the usually favorable prognosis of this disease. One of the cases will bear quotation.

A little girl was admitted to the hospital with a serious case of whooping cough, which after a time became complicated with a broncho-pneumonia. Fifteen days later, on February 20, the first crop of vesicles of a varicella made their appearance, and this was followed by several others. Gradually the child assumed a waxy pallor, and swelling of the face was noted, though albuminuria was not present. During the night of the 2d and 3d of March the child manifested difficulty in breathing through the nose, the nostrils being filled with crusts and discharging a sanguinolent fluid. On the 9th, symptoms of suffocation of such violence appeared that tracheotomy was discussed, but they yielded for the time to the application of a hot sponge over the larynx. Death occurred from suffocation on the following day. The autopsy showed a double broncho pneumonia. There was no edema of the larynx, but its mucous membrane was congested, presenting points of ecchymosis, especially about the true vocal cords and upon the under surface of the epiglottis. Posteriorly, between the two arytenoids, near the vocal cords, and upon the cords themselves, were found small vesico pustules analogous to those found on the skin. The erosion produced by these, however, was very superficial. Whether these vesicles are to be regarded as a true localization of a varicellous eruption upon the laryngeal mucous membrane, the author is considerably in doubt. This accident had occurred about the 10th of March, while the first crop of vesicles appeared February 20th, at a time when the lung presented lesions of broncho pneumonia and the kidneys those of nephritis.

Bronchitis is quite frequent; it may precede, accompany, or follow the eruption (cases of Rondot, Valin, Galliard). The author considers this bronchial inflammation as a specific manifestation of the disease, and not a simple coincidence.

Broncho pneumonias are divided by him into two groups. In the first are the cases where broncho pneumonia is late, and where varicella clearly seems to furnish the pulmonary lesion (cases of Rogivue, Hogyes, Semtchenko). The second group contains the pneumonias which occur in the first few days, as in the case of Manouvriez, where a broncho-pneumonia appeared in the beginning, and was heralded two or three days in advance by convulsions.

Pleuro pneumonia as a complication of varicella is illustrated by an observation of Rille, who found it in an infant of nine months, and by another of Abercrombie, who at the autopsy upon a case of gangrenous varicella found a double pneumonia with a pleural exudate upon one side

Finally, he reports an observation of Semtchenko relative to the autopsy upon a female infant of eleven months, who succumbed to a purulent pleurisy beginning three days after the complete disappearance of a varicellous eruption.—*Am Jour. Med. Sci.*

The Cold Poultice as an Antipyretic in High Grades of Fever.—Bedford Brown, in the Virginia *Medical Monthly*, advises the use of the cold

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poultice. He orders that a sufficient quantity of flaxseed meal to prepare a poultice of suitable dimensions be placed in a common earthen bowl, and over this is poured boiling water, while the meal is constantly stirred with a large spoon until cooked to the consistency of soft mush. This material is then spread on a piece of soft cotton cloth, for an adult, about eighteen inches long and twelve or fourteen wide, or sufficiently long to cover the entire abdomen, from the pubis upward, extending at least half way up the chest, well over the cardiac region, so as to fully cover the heart and half of the chest. This poultice is now covered with another piece of cotton of corresponding dimensions. After being spread and covered, the entire surface to be applied to the person is frequently besprinkled with ice water until its temperature goes down to 68° or 70° F., when it is ready for application. At this point the author suggests that the poultice be not spread too thick, as in that case it would prove oppressive to the patient.

The poultice as thus prepared is applied over the chest, from above the cardiac region to the pubis. In the writer's experience with it, which dates back fifteen years, he has never known it produce shock to the nervous system or discomfort to the patient. On the contrary, patients with high fever, who have learned its advantages, will often request it when they feel sensations of rise of temperature. Its work, different from that of the cold bath, is accomplished slowly, gradually, gently and effectually. The cold poultice applied in this way is a good substitute for the cold bath, without its many disadvantages, dangers and difficulties of application.

In cases of fever, with a dangerous degree of hyperpyrexia, say 106° or 106.5° F., with delirium, insomnia, constant restlessness, contracted pupil, scanty, high colored urine, these symptoms clearly indicate that this intense degree of temperature is exerting a destructive influence on the great nervous centers,—the brain and spinal cord; and if prompt measures are not taken to reduce this hyperpyrexia to a safe degree, the brain and spinal cord will be overwhelmed in hopeless ruin. This can only be accomplished either by the cold bath, internal antipyretics, or the cold poultice. In certain cases in the author's practice the latter measure, applied over the entire spinal column, from the cervical vertebræ to the sacrum, with these symptoms, has exerted a marvellous effect in relieving the nervous system, in subduing inordinate nervous erethism, relieving delirium and restlessness, and in promoting sleep.

In a case of this kind, during a relapse from a four weeks' illness, where the temperature approached 106° F., pulse 130, utter sleeplessness, and constant restlessness, a long poultice, at 70° F., was applied from above the cardiac region to the pubis; another, at the same temperature, ten inches wide, was applied over the nucha to the sacrum, and the head having been shaved, an icebag was applied over the head. In two hours there was a reduction of two degrees; in twelve hours a reduction of five degrees, with copious warm perspiration, with the result of refreshing sleep, nervous composure, relief of delirium, and reduction of the pulse to 100. On one or two occasions subsequently, when there was manifested a disposition of these symptoms to return, the same remedies were applied, with identical results, and under the usual treatment the case terminated in recovery.

In the treatment of acute peritonitis the powers of the cold poultice have not been tested by him as an antipyretic and antiphlogistic. He believes that in this class of cases poultices, at a temperature of 70° F., applied systematically at intervals of one hour, would exert a beneficial influence.

There is a certain degree of art to be observed in the preparation of these poultices. They should not be spread so thick and heavy as to weight down the patient and cause a sense of oppression; not over a quarter of an inch in thickness, and then reduced to a uniform temperature, as tested by the clinical thermometer. In cases of temperature not exceeding 102° F., Brown often orders a cold poultice at first made with hot water, and then permitted to cool either by the atmosphere or application of ordinary hydrant or pump-water, and obtains excellent results.—*Therapeutic Gazette.*

SURGERY.

Choice of Anesthetic for Removal of Naso-Pharyngeal Adenoids.—In the *Medical Chronicle*, Moritz goes carefully over this subject, which has lately been discussed at a joint meeting of the London Laryngological Society and the Anesthetists' Society, and, considering the frequent occurrence of cases of naso-pharyngeal adenoids, it must be acknowledged that the subject is one of considerable interest.

Wyatt Wingrave, in a letter to the *British Medical Journal*, drew renewed attention to this subject. He says that he has administered anesthetics for tonsillotomy and removal of adenoids upward of eleven hundred times. In about 90 per cent of these cases he has given nitrous oxide gas alone, administered through a modified Clover's gas and ether inhaler, the patient being in a sitting posture, a mouth prop being inserted before applying the face-piece, while the whole operation was usually completed in less than forty seconds. The supplementary administration of a few whiffs of ether was not always satisfactory, as it increased the struggling and bleeding. In less than twelve cases a second administration of gas was required. He warns against the use of chloroform in these operations, and collates five cases of death under chloroform for removal of adenoids, recorded in the *British Medical Journal* and *Lancet* since May, 1892. He remarks that the use of gas was prompted more by "humanitarian" reasons than with the object of combating serious pain.

Holloway draws attention to two more deaths which had occurred within a fortnight from the administration of chloroform for the removal of adenoids, and he

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urges again the advisability of being satisfied with the anesthesia obtainable by nitrous oxide, as generally done at the Central London Throat Hospital. Mr. G. C. Wilkin also uses nitrous oxide, while Dr. Storry administers ether. Mr. Grant Morris, anesthetist at St. Thomas's prefers chloroform. He keeps the patient on his back, with the head hanging over the end of the table, and he does not push the anesthetic, so that the cough reflex will not be abolished

At the meeting of the Laryngological Society, held on April 11, 1894, of the sixteen gentlemen whose speeches are reported, six are in favor of nitrous oxide alone; but two of these let the inhalation of N_2O be followed by an inhalation of oxygen, and three of them by the administration of ether in more severe cases. Two gentlemen always administer N_2O and ether; one, N_2O, ether and chloroform; and four give chloroform at once, two giving it until deep anesthesia, while two others do not push the anesthetic quite so far.

Considering the diversity of these predilections, Dr. Semon, the president, was therefore justified in pointing out that the discussion had proved the impossibility of laying down arbitrary laws on this question. He considers the practice of performing such operations on out patients very deplorable, and he objects strongly to the induction of complete anesthesia; the ocular reflex should be abolished, but the cough reflex should not.

Latterly, the writer has followed the plan advocated by Wroblowski, of Warsaw, who either paints the parts to be operated upon with a solution of antipyrin (2 parts), cocaine (1 part), and water to 10 parts; or, bet ter still, paints with a ten per cent cocaine solution, and injects a few minutes after in two or three places, under the mucous membrane in each place, 2 minims of a fifty per cent antipyrin solution. Wroblowski was able to remove in this way, painlessly, lamellæ of a deviated nasal septum, operations which lasted half an hour; and the author confirms Wroblowski's statement that not only tonsils and adenoid vegetations may in this way be removed without pain, but that there is no pain afterwards. Wroblowski applies these solutions with similar good results in removal of the lingual tonsil,—a very painful procedure,—and after injecting a few drops of the antipyrin solution under the mucosa with a Heryng's laryngeal syringe, he is able to do painlessly prolonged laryngeal operations. The same application he has made in cases of tubercular ulceration of the larynx where deglutition has become painful and for solid substances impossible. In a patient of this sort, who had not been able to take solid food for about six months, one hour after the injection of a fifty per cent antipyrin solution into the region of each arytenoid body (one division of a Heryng's syringe, equal to 1½ grains of antipyrin, being applied in each place), the patient was able to eat a beefsteak. Soon after the injection a slight burning sensation is felt. This lasts about fifteen minutes; then the local anesthesia commences, and the loss of sensation lasts from six to twelve hours. The ulcerative tubercular process itself seemed to be favorably influenced by these injections. The author is applying at present, with similar favorable results, a paint (ten per cent cocaine and thirty per cent of antipyrin) twice a day to the larynx of a tubercular patient, in whom the deglutition of the saliva even had become extremely painful, and who is now able to take food and to swallow for six to eight hours after each application.

The local application of strong solutions of antipyrin to mucous membranes deserves, therefore, a much wider trial.

Where general anesthesia is indicated for the removal of adenoids attention might also again be drawn to bromide of ethyl, so ardently recommended by Hollaender at the Berlin International Medical Congress. This fluid, C_2H_5Br, has its boiling point at 105° F.; it therefore evaporates quickly; its odor is similar to chloroform. It was first used as a general anesthetic by Thomas Nunneley, of Leeds, in 1869, who for some time did all his eye operations at the Leeds Infirmary with this anesthetic. Since then it has been extensively used both in America and in France, mostly for dental operations. Unfortunately, several deaths have been recorded, but Hollaender and others ascribe these to the use of an impure preparation, as until recently it was somewhat difficult to obtain the pure drug, "ethyl bromide," C_2H_5Br, owing to the frequent admixture of ethylene bromide, $C_2H_4Br_2$, a very poisonous drug. Hollaender administers ethyl bromide with an Esmarch chloroform inhaler, holding it closely over the mouth and nose to exclude air, and continually dropping the fluid on until anesthesia is established, which takes place in thirty to forty seconds, and frequently in ten to twenty seconds. The anesthesia so obtained is not complete, but is sufficient for small operations. The cornea reflex is not abolished, and it is not advisable to wait for its abolition, but only until the uplifted arm falls powerlessly down. Hollaender then at once proceeds to operate; the anesthesia lasts two to three minutes, and the patient is in another minute fully awake. The pulse remains unaltered; it sometimes becomes even fuller; the pupils are not influenced; vomiting, a stage of excitement, headache, and other bad effects are said to be rare. From 1 to 3 drachms (3 to 10 grammes) of the drug are usually sufficient for an administration. A slow or continued administration of large doses causes considerable excitation and prevents a narcosis altogether. Though bromide of ethyl is said not to influence the heart, it should not be administered to patients with heart disease. Schmidt also recommends this drug for anesthesia in removal of adenoids and tonsils, but he finds that he usually requires a larger quantity of the anesthetic. He has never seen any serious after-effects; but vomiting, he says, takes place occasionally. He therefore prefers to operate early in the morning, and not to give solid food previous to the operation. Schmidt also mentions that frequently the mouth is tightly closed, through contraction of the masseter muscles, so that a gag becomes requisite.—*Therapeutic Gazette.*

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NOTES AND ITEMS

St. Louis Medical Society.—Dr. W. J. Moore has been appointed Chairman of the Committee on Ethics vice Dr. Wm. M. McPheeters resigned; Dr. W. H. Hermann in place of Dr. Robert Barclay resigned.

Acceptance and Resignation.—The following is a copy of a letter which is self-explanatory, and consequently needs no comments:

150 East Broad Street,
Columbus, Ohio, December 19, 1894.

Dr. S. S. Thorne, President National Association Rail way Surgeons, Toledo, Ohio:

Dear Doctor.—Having been officially notified of my unanimous election to the position of Editor of the American Academy of Railway Surgeons, and having decided to accept the same, I beg leave to tender my resignation as the duly elected Editor of *The Railway Surgeon*, the official organ of the National Association of Railway Surgeons, to take effect January 1, 1895.

With my best wishes for a continuance of the prosperity of the National Association of Railway Surgeons and the future success of *The Railway Surgeon*, its official organ, I have, my dear Doctor, the honor to re main, Very respectfully and fraternally yours,

R. Horney Reed, Editor.

The Method Used by the Somalis for Enforcing Virginity.—The custom of enforcing virginity is adhered to by the Somalis with a most religious strictness (*Indian Medical Record*). The *gabad* or maiden, when seven years old, is forced to submit to a plastic operation, the operator in this instance, as in all other cases of surgical necessity, being the *wadad* or priest. He pares the coinciding edges of the labia majora upwards of three-fourths their length in the antero-posterior direction, and holding them tight between the forefinger and thumb of his left hand, effecting thereby the coalescence of the pared margins, he fixes them by means of three stitches. The needle used here is a wooden one, smoothly hewn from the trunk of a certain tree, said to be mentioned to their Koran; and the thread is a coarse, thick twine twisted from the interior of the bark of the very same tree. There is only a very small opening left for the menstrual discharge and the escape of urine, which has to find its way out the best way it can. After the operation the young lady is placed on a mat on the floor of their abode, which is of very frail and temporary construction, specially so intended to meet the requirements of their nomadic pur suits. There she lies for several days, her legs tied together, with no dressing of any sort, except a piece of rag used as a covering for the part, until nature *versus* ill-nature sets up a friendly union of the parts. The *gabad* usually gets married after the age of twelve—that is, if there happens to be a young man about who is desirous of marrying her. The duty of breaking through the dam devolves upon the bridegroom, who is often too shy to undertake such an operating measure, in which case he is replaced by the oldest woman of the family, who with the help of a small knife surmounts the difficulty in no time.

A Complimentary View of American Medicine.—At the recent anniversary festival of the *Deutsche medicinische Gasellschaft der Stadt New York*, on Saturday evening, December 15, 1894, Dr. Jacobi responded to the toast of *die amerikanischen Collegen*, and said that he proposed to speak of the American physicians as scientists, as practitioners, as citizens of the country and members of the profession, and as colleagues. The first two were practically one, inasmuch as the two could hardly be distinguished in a science which was eminently practical. He referred to S. Bellingham, who left Harvard College in 1642 to complete his studies in Leyden; to Cadwallader, who, in 1751, delivered his first systematic course of lectures in Philadelphia; to the first Philadelphian who was made bachelor of medicine, in 1768; and to the first New York doctor of medicine, made one in 1770. During and since this time American medicine had developed in connection with the English for the same natural reasons that, in Europe, the northern part of Switzerland developed its medicine on the basis of German medicine and the western part on that of France, and that of Russia on the basis of German and French medicine. American physicians were never slow in learning from and emulating Great Britain. In the year 1796, when Jenner introduced his vaccination, Waterhouse followed him in Cambridge and Jackson in Boston. But American medicine was never simply imitative. The speaker referred to the still classical essays of Bard on diphtheria; to the medical inquiries of Rush, who, at the same time, was a statesman and one of the signers of the Declaration of Independence and an intimate personal friend of George Washington; to the classical essays of William Currie on the diseases most prevalent in the United States, published in 1811; to McDowell's first ovariotomies in 1809; to David Hosack's essays; to the great work of Drake, who, at a later period, 1850-'52, published his two famous volumes on the infectious diseases of the Mississippi Valley. He also referred to Jackson, who, in 1832, proclaimed prolonged expiration at the apices of the lungs as one of the symptoms of incipient tuberculosis, a symptom which was adopted by Louis and his disciples; to Fisher, of Boston, who was the first to explain the cranial murmur of rhachitis; to Gerard, of Philadelphia, who was the first to distinguish between typhus and typhoid fever; to Carr, who was the first to explain the cause and the nature of the crepitation in the beginning of pneumonia; to Oliver Wendell Holmes, who, nearly twenty years before

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Semmelweis, proclaimed the contagious nature of puerperal fever; to anesthesia as discovered by Morton and Jackson; to Horace Green, who, the first laryngological specialist of the world, was the first to make the larynx accessible; to Bowditch, who, first in 1852, and later in a paper read before the New York Academy of Medicine in 1870, preached the gospel of operations for empyema; to Valentine Mott, for his immortal operations on arteries; to Marion Sims, for his inventive genius and new operative methods; to Cheever, who was the first to operate on the pharynx from the side of the neck; to Weir Mitchell, for his works on injuries of the nerves and for many other great achievements; to Bigelow, for his operations on the bladder; to Beard, whose name had become a household word in both hemispheres in connection with neurasthenia. Dr. Jacobi also referred to such monographs as were strictly scientific, like those of Horace E. Wood on fever; to those of Weir Mitchell on snake poisons; to Fitz's original work on the pancreas; to Minot's book on embryology, and to the many valuable original papers contained in the cyclopedias of Pepper, Keating, Starr, and Keen and White. He also emphasized the fact that there was no specialty that had not had its great representatives among the American practitioners and scientists of the last twenty or thirty years. He mentioned particularly La Roche, Alonzo Clark, Flint, Da Costa, Osler, Mott, and Willard Parker, who was the first, together with Hays, of Philadelphia, to perform tenotomies after the manner of Dieffenbach, even before the arrival of Detmold in this country. He mentioned many names in connection with the other specialties, particularly those of Stille and of Wood and Bache for pharmacology; that of Leidy for anatomy; and those of Billings and Fletcher in connection with the greatest lexigraphical enterprise of our times, and perhaps of all times, the Index Catalogue of the Library of the Surgeon-General's Office in Washington.

In order to prove the presence of education and culture among a number of the American medical men, he again referred to Holmes; to Josiah Nott, who in his time was one of the most learned Egyptologists; to Weir Mitchell, who, while being a recognized authority on neurology, was known as a poet and historical writer; and to John Watson, who had been both a good surgeon and a good medical historian.

The speaker added that the spirit of American medicine, like that of Anglo Saxon medicine in general, was decidedly objective. It had enjoyed a healthy development from the very beginning and had never swerved, as it had, for instance, in Germany, where for the first forty years of this century it had been lost in mysticism and so-called natural philosophy. During all this time American medical life had had one great blemish, which was that the profession had, by its fighting and ostracizing the German fad of homeopathy, instilled more vigor into the medical sects than was perceptible in any other country.

The speaker then alluded to American physicians as members of their own profession, and laid particular stress on the fact that we had no protective organization due to the State or to the general Government; that whatever improvement there was had been due to the exertions of the profession alone; that the American principle of "help yourself" was always visible in the doings and progress of the profession. This self protection had been the cause of the origin of the Code of Ethics, which enforced a discipline that was not known in Europe, and excluded advertising in general and the announcement of a specialty in particular, which were not at all forbidden in the professions of Europe. It was the same spirit of self-protection, however, or rather the spirit of increased moral strength, which, finally, in the State of New York, had led to the abrogation of the very same Code of Ethics as no longer necessary. It was due to the efforts of the profession in nearly all the States and to a number of the members of the profession themselves that a certain minimum of preliminary knowledge had at last been recognized as an absolute requirement for the study of medicine. It was also the result of the exertions of the profession, and not of the medical schools, that the courses of medical instruction had finally been lengthened and multiplied, and the principle of State examinations adopted. The absence of State protection and State organizations had led, in the American profession, to the establishment of large co-operative societies, State societies, the American Medical Association, and the Congress of American Physicians and Surgeons. It was this spirit of co-operation which had led to the flourishing condition of medical societies in New York, and particularly to that of the New York Academy of medicine, which had its own large building years before the brilliant profession of Berlin owned its Langenbeck House.

Finally, the speaker referred to the American profession as colleagues. He said that there was no country on the globe where strangers would be received with the same generosity and liberality as here. Every one of these present knew that there were no obstacles thrown in their way by the profession; on the contrary, very many of them had met with a friendly reception, enjoyed all sorts of privileges, had occupied and were occupying public places, were often recognized as leaders, and had every reason to be glad for having come to a country where the medical profession, after having had a glorious past, had a still greater future in store.—New York *Medical Journal*

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ORIGINAL ARTICLES

Some Observations on the Treatment of Bubo.

BY J. BLOCK, M D., KANSAS CITY, MO,

Surgeon to German Hospital and Consulting Surgeon to St. Marguerite's and All Saints' Hospital.

Read before the Grand River Medical Society, December 6, 1894.

Complying with the request of the Secretary of the Society to contribute something for discussion to its members, I have concluded to record some impressions on the subject forming the title of this paper, which, owing to an unusual number of annoying cases during the past few weeks, has engrossed my attention. It is not intended to inflict the Society with an exhaustive review of so trite a subject, but rather to present some of its more salient features in order to elicit the opin ions and experiences of those who have, no doubt, given the subject considerable attention. A very brief resume of the literature of this, to me, not very unattractive subject reveals the fact, that as regards the etiology, bacteriology and therapeutics there is as yet no consensus of opinion, even among those who could speak authoritatively on the question. Only upon one point can we find them all agreed, and that is the desire to deal as radically and as thoroughly with the lesion as possible in the shortest possible time. With this object in view, however, it is marvelous to find how various the methods employed and the variety of views entertained.

In order to make myself fully understood, I have employed the term bubo, as its etymology indicates, in its most restricted sense, alluding to adenitis of the groin. It shall also be my intent to still further limit my observation to the consideration of that special form which we know is induced by a specific cause. Whilst I shall touch upon the possibilities of a pathological condition in the inguinal glands induced, or supposed to be induced, by causes other than this, it shall be only as a point of departure to controvert some of the opinions formerly, and even recently, held. No doubt it is the experience of most of those present that in the vast majority of cases a bubo, be it of the suppurating variety or not, is induced by a non infecting chancre or chancroid, seated somewhere about the genital tract.

Of course you need not be reminded that the inguinal lymphatics convey the lymph from the sub umbilical region of the abdomen above, as well as from the genital and perineal region below; in the female this would include the vaginal tract and cervix as well; and for the purpose of our present discussion we may also state that anatomically these glands may be involved when any lesion of the inferior extremity is the starting point of invasion, because of the free communication between the glands about the saphenous opening and those in the inguinal fold. Having indicated the non-infecting sore as the most prolific source of this trouble, let us see whether any agreement can be reached among those who have devoted themselves to the bacteriological study of this vice. It is maintained by Ducrey and Krefting that a specific micro-organism has been found in this variety of chancre, and that it is the cause, and the only cause, of this form of ulceration. Other observers, among them Unna, have practically agreed that this microbe exists, though their views differ as to its character. Unfortunately, however, the crucial test of propagation of pure cultures upon artificial media that are to prove infective, has failed; otherwise, however, these gentlemen have claimed to propagate the specific germ upon the patient himself for five or six or even more generations, and have finally gotten pure cultures. On the other hand the existence of any specific micro organism has been as vehemently denied by such excellent observers as Strauss and Jullien.

Naturally we suspect some infecting material to be the cause of a suppurating bubo, which has its point of departure in or about the ulcerative lesion upon the genitals; and yet it is found that the pus of the simple variety is free from any micro organisms whatsoever. From a practical point of view this should be well borne in mind, for it is not without its significance in the radical treatment of the trouble. On the other hand it is held that a virulent bubo contains the microbic elements of suppuration, as well as the specific organisms at the original site of the lesion. Even this has been denied, observers stoutly claiming that the virulent bubo only becomes so secondarily, being infected after its exposure to the atmosphere. My observations seem to lend sup-

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port to the latter portion of their claim, though they may be too limited to arrive at any positive conclusions.

The non-virulent or simple variety is then held to be due to the irritating qualities of some chemical product of the specific organisms absorbed into the lymphatic channels as an emissary without their personal presence. It seems strange that a specific urethritis should be so seldom complicated by suppurating bubo when we compare the extent of the mucous lymphatic surfaces exposed to the contagion with that of the usual limited surfaces in the non-infecting chancre. This, to my mind, has often created a suspicion that we were dealing with both lesions—chancroid and gonorrhea—though one might have been possibly overlooked when this complication was encountered. Indeed, I regard it as a relatively rare event to find a suppurating bubo complicating a gonorrhea. In this latter malady it is not an uncommon thing to observe the dorsal lymphatics of the penis inflamed, tender, and the tissues edematous, with possibly a slight engorgement of the gland over the pubis, which soon subsides without going on to suppuration; on the other hand an inflammation of the same structures with subsequent abscess formation upon the sheath of the organ, the so-called bubonulus, is also relatively rare. If this be borne in mind, I cannot refrain from indulging a well grounded suspicion that the suppurating bubo associated with a gonorrhea has its origin in a non-infecting sore in the urethral channel, or perhaps elsewhere, that has been overlooked. Of course, I do not hold this to be true in the non-suppurating variety, well knowing the tendency of irritants on the mucous surfaces to produce adjacent glandular enlargements.

The so-called bubo d'emblee, which by the older observers was regarded as an evidenc of inoculation from the outset, without any intervening infection of the skin, and which has long since been regarded as an error, probably found its adherents among those who were rather superficial in their observations. It is now well known that a non-infecting sore may have cicatriced weeks, and even months, prior to the appearance of its consecutive bubo, and that bubo, too, being of the virulent variety. We have seen a number of instances of this, and only recently have had proof positive that the bearer of this lesion was inoculated without his knowledge, perhaps several months prior to his coming under observation. Still he stoutly disclaimed any knowledge of any such infection. Of his honesty I have no doubt, though his faculty of observation was not well developed. I only cite this among a number of similar instances to show that those simple suppurating bubos attributed to fatigue, over exertion, etc., without any appreciable lesion determining their existence, either upon the lower extremities, or the genitalia, are to be regarded with suspicion. Though I am not prepared to deny their existence, I think we should hesitate in accepting the statements of the patient.

Referring again to an instance which has recently come to my notice where every possible source of infection was positively denied, and where diligent search failed to reveal any evidence of its previous existence, the bubo presented evidence of virulence shortly after its incision. Why a suppurating adenitis should be more common in the inguinal region than in the epitrochlear or axillary region among adults without any point of visible infective entrance to be attributed merely to exposure, over exertion or fatigue is not readily understood. Anatomically, I would suppose that a prolonged march, undue strain, etc., would declare itself with incriminating evidence about the saphenous opening, with or without an involvement of the inguinal chain rather than be limited to the latter lymphatic channel, as I have usually observed it when such claims were made. This is a point well worthy of your attention, and upon which I shall be glad to secure any information.

The enlargement and induration of the lymphatics consequent upon the true chancre is worthy only of a passing reference in this connection, for suppuration where we can eliminate the possibility of the mixed variety of sore is among the rarest of events. Indeed, I have been constrained to believe that we must have been dealing with both lesions when this was encountered.

It should be borne in mind, however, that struma—whilst regarded by some as distinct from tuberculosis—and the latter as well, are not without their influence in determining inguinal enlargements of an indolent or suppurative character and the presence of any stigmata, either hereditary or acquired, should always be borne in mind. In passing I may also state that the theory of those who failed to find a specific organism at the point of chancrous implication, assuming the sore to be simply an evidence of suppuration akin to that due to any cause elsewhere upon the body, is wholly groundless. Though this statement is made with the full knowledge of the contagious character of suppurative lesions of the skin, notably the ordinary furunculosis, we find that this is usually only so upon the skin of the bearer and is rarely communicated to another individual. Nor can we seen why an ordinary ulceration should be modified by a simple change of location so as to be indefinitely communicable to other persons. Still we must not ignore the fact that there are many adherents to this theory.

Though there is abundance of material that would profitably occupy our time for speculation in these premises, I shall remain true to my promise, avoiding all that with which most of us are certainly familiar, and now consider that which usually interests us most, namely the treatment. All unnecessary details and much which has been considered of value will also be ignored, preferring rather that the discussion will enable me to secure information which I still find lacking. It is undoubtedly the universal experience of the practitioner that of all diseases the venereal is least susceptible of model treatment, the circumstances being such that we are forced to desist from ideal methods. In-

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sistence upon secrecy, protests against enforced rest, oftentimes ignorance of the simplest hygienic rules, render the surgeon's efforts futile.

Should it be the good fortune of some practitioner to number among his cases a majority of those bubos which may be classed as a hypertrophic adenitis, simply the result of a glandular reaction to an irritant focus, he would probably congratulate himself upon some special effectiveness in his treatment. These are the cases that usually subside under simple rest, with or without local applications—usually of very uncertain value—with or without the modern methods of interstitial antiseptic injection and can be finally completely reduced by pressure, either in the form of a shot bag, a spica bandage, or a convenient and ingenious method which I have frequently employed, namely an ordinary brick, enveloped in paper or cloth.

It is not my purpose to detract from the assumption of experienced observors that parenchymatous glandular injections, those of mercury in its various forms, carbolic acid, etc., are unavailing; but from my limited experience I should say that they are very painful and not always effective.

In these modern days where asepsis has contributed so much to successful surgery, it would not be amiss to consider its application to the subject under discussion, and to show why it is not at all times equally productive of good results. Yet we should not ignore the fact that in dealing with the suppurative variety by incision, we are dealing with an abscess as yet free from pyogenic micro organisms. Unfortunately the conditions under which we are forced to institute our practice, coupled with regional anatomical difficulties, render its ideal application next to impossible.

It is true the sufferer clamors for speedy relief but is not always willing to meet the surgeon with that generous spirit of co-operation that might otherwise engender success. Rest, the most essential prerequisite to surgical success, is absolutely ignored. Willing, perhaps, at a later stage of the trouble to surrender to the inevitable in order that he may be radically rid of his trouble, he is not willing as a rule to submit for more than a few days at most to enforced rest at the beginning. During the past few weeks I have radically dealt with a number of these cases, and in only one was I permitted to follow my advice early in the history of the trouble, and yet not sufficiently early to effect what has been my object upon several occasions, primary union along the line of incision. When dealing with a suppurating bubo it has been the experience of most operators that simple incision with packing does not always suffice. We are almost sure to encounter additional abscess formation requiring subsequent incision, and often times leaving a number of fistulous tracts, finally requiring radical excision of the glands, etc., after months of annoyance before effecting a cure.

In speaking of the method by incision, it has been my practice to vary the usual line of division parallel with Poupart's ligament by one at right angles to this, in this manner insuring its patency. You will readily understand, and your own experience no doubt corroborates the inefficiency of the former method, the lips of the wound being always in contact, except when the leg is extended. If there be two abscesses, it is sometimes well to make two distinct incisions, but where it is evident that the partition wall must break down, it is as well to include both in the one incision. If the patient will permit nothing more than this, it is well to flush the parts thoroughly with some antiseptic solution and pack with iodoform gauze. Of course the usual preliminary shaving and cleansing must not be forgotten. The longer you can keep your patient at rest the sooner will these abscesses heal, provided they are simple.

If one were endowed with that prescience where he might positively say at the very inception of the trouble this or that bubo will or will not suppurate, so that he might anticipate the peri-adenitis, early incision with enucleation of the affected glands under strict antisepsis with suture and drainage might yield ideal results. Here an absorbable drainage tube would serve the two fold purpose of keeping the lips of incision in contact in the inguinal fold, drain the part and disappear when its period of usefulness is at an end. Unfortunately, we are compelled to attempt the removal of the glands under conditions distinctly the reverse of this. The skin riddled with fistulæ, the glands caseous or suppurating, the cellular tissues broken down, and oftentimes gangrenous, so that nothing but a thorough grattage of the ragged and uneven surfaces, a large gaping wound impossible of coaptation because of its location, is left that must heal by granulation.

In operating upon one such case a short time since, which began as a large indolent mass in the right groin in an individual previously enjoying the best of health, who positively disclaimed any infecting lesion and who had never been the subject of venereal taint, except a gonorrhea many years previously, I made two preliminary incisions at different times to evacuate a small amount of pus, carefully packing according to the usual methods, only to find after two months of unsuccessful effort, the pus burrowing about as though under mole hills, and when the patient was brought to the operating table, an incision almost from the anterior superior spinous process to the pubis was necessary to enucleate a mass of glands in the groin and about the cribriform fascia, some of which presented a healthy appearance externally, but were caseous or purulent in the interior. This even did not suffice, the deep fascia was involved by adventitious deposits thickening it very considerably; the skin was thin, bluish, unhealthy, undermined in every direction, so that when the operation was completed an enormous cavern was left which would require at least two months more for complete recovery. In this case the femoral vessels were exposed, a point to which I would like to call attention, because death from hemorrhage has ensued in consequence of reckless manipulation in these operations. A little reflection would certainly favor the idea that removal of the mass

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when first seen might have been possible with primary union of the wound. It has since developed that this case, cc, was in reality the consequence of a very superficial lesion several months prior to the beginning of the trouble, which the patient claims to have forgotten, thus adding another item to one of my statements, that a suppurating bubo is rarely the result of over exertion.

Operating upon another case the same day where I thought to have had the advantage of time, since it was less than three weeks old, by thoroughly enucleating the mass and by grattage removing all the debris, I brought the lips of the wound into exact apposition over a gauze drain and flattered myself that I had secured coaptation. This seemed to be true when removing the sutures some five days thereafter. But, notwithstanding the thorough cleansing at the time of operation and although the chancroid had cicatriced, symptoms of virulence presented themselves in the wound, and the line of union broke down so that I was even here compelled to await union by granulation.

Where one has the choice of methods, strict rest, drainage, cleanliness, antisepsis, etc., to the initial lesion—though I prefer early cauterization with the pacquelin—enucleation upon the first presumptive signs of suppuration without waiting for fluctuation, will ensure the best results and probably save time. Undoubtedly there are many cases where simple incision will relieve the trouble, but no one is certain whether secondary measures must be adopted or not. Sometimes the simple enucleation of one gland with the finger will insure success, but all these proceedings are doubtful. Only recently in dealing with a case these temporizing measures did not relieve my patient until three months had expired. Should the bubo become virulent it should be thoroughly dealt with by the Pacquelin and iodo form, both in substance and in gauze as a dressing. The phagadenic variety should meet with a similar treatment, early grattage, the Pacquelin and iodoform being almost specific measures. Of course we are not to neglect systemic measures, a liberal diet, tonics, etc., but always with that *sine qua non*, surgical rest.

Treatment of the Morphine Habit.

BY F. ROBERT BOYD, A.M., M.D., ST. LOUIS.

My attention was called to this subject by a letter from W. H. B., in correspondence column of January 5, of the MEDICAL REVIEW in which he gives his "Experience with Morphine." During the last eight years I have had a good deal of experience in the treatment of the morphine habit, and I think it will be conceded by those who may be led to try it from what I may say here, that I have the correct theory. Such a letter as that written by W. H. B. alway awakens my sympathy. There is no class of patients who get so little sympathy, and yet who are worthy of it more than these adicted to the habitual use of morphine. As to the moral aspect of the habit much has already been written, and much might be added but I do not care to enlarge upon this phase of the subject. There are few, even among the profession who know much about it It is not an uncommon thing to hear even physicians speak of it as they would of the habitual use of tobacco, tea and coffee. When we hear any person talk about stopping the use of morphine as they would stop using tobacco or even whisky drinking, we take it for granted at once that they have no correct idea of what they are saying at all. I think there are few of these unfortunates who have been addicted to the drug for any great length of time who, even though they may possess sufficient will-power, can abstain totally without suffering death as a consequence.

The portrayal of suffering and prostration as given in the letter of W. H B. can only give a faint idea of the reality. The most splendid talents can not even approach a true description of what must follow the sudden withdrawal of this drug from the victim. To De Quincy, the English opium eater we are indebted for the most vivid portraiture in our language, of the deadful hell into which it plunges its votaries, but the great question which most interests us, is not so much the dreadful consequences of its habitual use, as, how can we, by any known methods liberate these poor victims? How can we break these shackles, and send out into the world again, free and happy the poor victim who, perhaps for years has eagerly looked in all directions for help, trying this advertised remedy, and that, ever and anon hopeful, yet to whom no help has ever come? This, I think is a question which any one may well feel proud to answer, providing he can really do it, and do it in a manner which time and trial shall prove worthy of the effort. It is such an answer as this the humble writer attempts to give in this paper, and to our friend W. H. B. and all other victims of this habit let me say, I hope sincerely this may come to your early notice, for I know the following plan of treatment, if faithfully observed will enable you to throw off the bondage that now binds you, and do it with the smallest possible amount of suffering, not only this but it will leave you in a good physical condition when you are through. I wish to add only this request, it will please me greatly if any one who tries this plan will correspond with me, and let me know how you get along with it. Of couse, I do not believe in any steriotyped treatment, for each case has its own peculiarities which ought to have intelligent oversight, yet in the main the treatment has a rational basis and will, I believe more nearly meet the demands of every case than any other I have ever seen tried.

In the first place, see to it that the drugs or medicines used are of the best quality.

My experience has been very unsatisfactory with many of the fluid extracts. It is quite easy to get preperations of no value.

Having selected such as you can depend upon prepare the following prescription:

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℞ Ext. cinchonæ, - - - fℨiij.
Ext. cocæ erythroxl., - - - fℨiss.
Ext. belladonnæ, - - - fmxv.
Strychnia sulphate, - - - grs.ij.
Ammonii muriat., - - ʒss.
Glycerini et aquæ, - - aa q s. ℨviij.
M.

Sig. One teaspoonful every three hours during the day time and at night if necessary.

Begin by weighing the exact number of grains of morphine you use daily (in 24 hours) cut this in two and instead of your usual dose take just one-half, and continue to take this amount for ten days, taking the medicine right along in connection with it, at the expiration of ten days, cut the morphine in two again that is; if you were orignally taking 20 grains daily, begin by taking 10 grains, and continue to take 10 grains daily for ten days On the tenth day reduce the amount to 5 grains in 24 hours, and continue this amount for ten days more Then cut to 2½ grains and continue for ten days, etc. Cutting it in two, or reducing the amount just one-half every tenth day. During this time take a warm bath at least twice a week, and keep the bowels open with a C. C. pill, alternated by a saline laxative now and them. If constipation does not trouble you much take a C. C. pill often enough to keep the glandular secretion in good tone. This is very important and should not be neglected. It is well to take along with the cinchona prescription, regular doses of Keith's Conc Tinct Arvna Sativa, every two or three hours; this should be taken in from thirty to sixty minnums doses, alternated with the cinchona prescription. Along toward the last when the morphine gets down below a grain it may be necessary to cut a little less than one-half, yet most of patients can bear that reduction with no inconvenience whatever. When you put it down to an eighth grain, then keep drawing out a little longer time between the taking of each dose, taking the other medicine constantly until by and by you will for get to take your dose of morphine. When you get it reduced to so small a dose it is best to break the regularity in taking your dose; it is necessary to take only one dose a day and by prolonging the time for the taking of this it is easy to break such regularity. After you have ceased to take any more morphine, continue for a couple of weeks to take the cinchona and strychina until the full tone and vigor of the body has completely returned.

If the above directions are carried out to the letter, there is no trouble in breaking up this habit. The greatest care should be exercised in weighing the morphine, and after once making a reduction, let nothing tempt you to increase the amount in the least degree, and there will be no trouble in making the reductions. I have known patients not to loose even a night rest at the time of making it. The tonic keeps the strength and forces of the body on the increase while the ten days time between reductions gives sufficient time for the system to fully accommodate itself to the next cut in the morphia. This pain if carefully followed enables us to succed in the treatment of the morphine habit quite as well as we can in any other curable disease. I have no sympathy with the plan of immediate withdrawel. While good care and medication may enable some of them to get throgh, yet the degree of suffering and the probabilities of relapse are very great.

While this plan is neither an immediate withdrawal, a rapid reduction or prolonged gradual reduction; it is taken away in such quantities and at such intervals as to give the patient the advantage of all that nature and other assistance can do for him.

No one need remain subject to this slavery if they will get down to business and follow out the instructions here given.

Hoping this may fall under the eyes of, not only W. H. B., but many other poor victims who would do all they can to get well and free. I shall be glad to impart any instructions I may be able at any time.

810 Olive St.

An Addition to the Technique of Major Amputations.—Crede)*Arch. f. Klin. Chir.*) relates his experience in twenty two major amputations which he had done within the past two years, and in which he obtained healing by true primary union in two-thirds of the cases. In the other cases healing followed, after slight local sloughing, within three weeks, except in one case in which there had been gangrene and septic infiltration of the tissues; here healing followed after four and one-half weeks.

Contrary to the general custom, this author makes flaps composed of both skin and muscular tissues and uses neither drains nor sutures. After making the flaps and tying the arteries, he places the flaps in apposition, and holds them there by means of a moist gauze bandage, three inches wide, applied so as to exact a uniform pressure, using neither drainage tubes nor sutures. The difficulty in the method is the application of direct pressure to the surface of the stump, which he does sufficiently to hinder serous exudation and to prevent bleeding. If there chance to be points in which the skin surfaces are not in exact apposition, they heal more quickly than the tracts left by the drainage-tubes.

The method of applying the pressure is not difficult to understand. The bandage begins on the under-side of the stump, passes over the end, and is repeated until the stump is covered over; during this time the apposition of the skin edges can be observed through the thin bandage. These longitudinal turns are followed by circular ones covering in the stump; then turns, starting on the sides and passing over the end of the stump, are used, followed again by spiral turns.

The bandage remains in place for from eight to ten days, when all the deeper portions will be found to have been healed. If pain or high fever show themselves, the author splits up the bandage, but does not remove it, covering it in with another bandage.—*Amer. Jour Med. Sciences.*

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EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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Dissenting Estimates of the Value of Diphtheria Antitoxine.

Upon the discovery of a new truth, particularly in medicine, it is an old experience that it takes a long time before this truth is generally accepted and it could not be expected that the claims of Behring, Roux and many clinicians, as to the therapeutic value of diphtheria antitoxine would remain unchallenged. In a lengthy paper, read at the Berlin Medical Society, W. Hansemann, an assistant of Virchow, attacks all the assertions made in favor of the Diphtheria healing serum and contends, moreover, that the Klebs-Loeffler bacillus has not been proven to be the cause of diphtheria. The bacillus does not occur in all cases of Bretanneau's diphtheria, it is never found alone in this disease and is also found in diseases that have nothing in common with diphtheria as well as in entirely healthy individuals and causes in animals a disease, entirely at variance with the diphtheria in man. The author admits that he bacillus is found in many cases of diphtheria end that it plays a role in a certain percentage of diphtheria cases, but the diphtheria bacillus can not be admitted as the etiological factor of this disease. The doctor also denies that there is sufficient proof, based upon practical experience, of the immunizing and healing properties of the serum, and finally winds up with the statement that the serum has a deleterious action upon the kidneys and causes a disintegration of the blood.

It will occur at once to the reader that many of the author's statements are at variance with generally accepted facts, and that such sweeping negations of the views of some of the best authorities on the subject are probably based upon arguments of a speculative nature.

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More encouraging are the clinical reports of Prof. Widerhofer, of Vienna, who reports one hundred cases of diphtheria, treated in the new diphtheria pavillon of the St. Anna-Children's Hospital, during the months of October and November, 1894. With very few exceptions only the severer forms of the disease, including cases complicated by other diseases—sepsis, scarlet fever, measles, tuberculosis—were subjected to the treatment with Behring's serum. Of these cases the mortality proved to be 24 per cent, while the mortality of the previous nine months amounted to 52.6 per cent, and that of the year 1893, 44.6 per cent. Of interest is also the mortality at certain ages. Of the children in the first year of life eight were treated, five of which died; in the second year, seventeen, with six deaths; in the third, twenty, seven deaths; in the fourth, fourteen, no death; in the fifth, sixteen, two deaths. Of the patients from the sixth to the fourteenth year, seven died. Two of the patients died in consequence of a complication with measles and pneumonia and one of a double tuberoular pleuritis. One from capillary bronchitis associated with scarlet fever. The cases dying from these complications are included in the statistics in order that the author may have, as he puts it, —a clear serum conscience. In all these cases a deleterious action of the serum could not be detected.

These statistics are of much value, because all the lighter cases of the disease were excluded from the treatment, which was instituted irrespective of the stage of the disease. Widerhofer, who is known as a very earnest, exact and conscientious observer, sums up his experience with the serum treatment as follows:

"1. There cannot be the slightest doubt that Behring's serum influences certain forms of diphtheria so favorably that Behring's serum therapy may be called a method of treatment of diphtheria with which no other treatment can even approximately be compared.

"2. Cases of diphtheria that exhibit grave, even the gravest symptoms of intoxication, when injected during the first three days of the disease, are the ones in which the favorable, even surprising action of the serum is most apparent, provided the cases are true diphtheria and not a mixed form of the disease.

"3. There can be no doubt that Behring's statement is absolutely correct, that after the first three or four days of the disease the action of the serum becomes very doubtful, which does not imply that its application is useless.

"4. In those cases in which the diphtheritic process had already attacked the larynx we have not infrequently seen favorable results in the beginning of the disease or at

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least, after a short duration. But where the diphtheritic process had descended below the larynx the favorable results are rare. After the process has attacked the bronchioles or in cases of catarrhal pneumonia, no improvement occurred.

"5. In view of the above facts it is certain that the mortality of diphtheria will be greatly reduced by the serum treatment."

Therapeutic Use of Extract of Bone Marrow.

The bone marrow is considered by most authorities as the main seat of the formation of red blood corpuscles, which fact has of late induced a number of investigators to try its administration in cases of defective blood formation, the idea having no doubt suggested itself to them by the favorable results obtained by the administration of thyroid extract in myxedema. The hope was entertained that the bone marrow might contain principles which act as stimulants to the blood producing organs and it appears from a few cases that have been reported that this hope may be realized. According to John S. Billings, Jr., the first case of anemia treated by the administration of bone marrow was reported by Fraser.

"A diagnosis of pernicious anemia was made, based upon the history of the case, the number of red corpuscles and per cent of hemoglobin, and the poikilocytosis of the red corpuscles. No mention was made as to the occurrence of nucleated red corpuscles, the presence of which in the blood in pernicious anemia being a point upon which Ehrlich lays considerable stress. The case was given bone marrow with arsenic for the first two months, then bone marrow alone for a month, and finally bone marrow and iron for three months. In the first two months the corpuscles rose from 1,000,000 per cmm. to 4,000,000, ranging at the latter point until discharge, four months later.

"Bigger reports a case of leucocythemia in a boy, which was treated with the bone marrow. There was rapid diminution in the size of the spleen and marked improvement within a week. No mention is made of any examination of the blood, and it is possible that the case may have been one of splenic anemia or of the pseudoleukemic infantile anemia of Von Jaksch.

"Danforth reports a case of pernicious anemia apparently cured by the use of bone marrow. Here also the report of the blood condition is incomplete, as only the number of red corpuscles and per cent of hemoglobin are stated. The latter rose from 35 per cent to 80 per cent. The bone marrow in this case, as in that of Fraser, was given in combination with arsenic."

Dr. John S. Billings, Jr., has reported four cases belonging to the subject under discussion, which he reported at the Johns Hopkins Hospital Medical Society, and for which we are indebted to the *Johns Hopkins Hospital Bulletin*. The first case is one of chlorosis in a girl of twenty. The second, chloro-anemia in a boy. Case three and four are pernicious anemia in men fifty-one and sixty-five years of age. The examinations are exhaustive and done with a great deal of accuracy and are described in full in the *Bulletin*. The bone marrow was given in the form of glycerine extract which was prepared in the following manner:

Twelve sheep's ribs, carefully scraped, were chopped into small fragments and rubbed up in a mortar with one pound of glycerine. This was allowed to macerate for three or four days, being kept in a refrigerator during that time. It was then strained through gauze, and the resultant liquid administered in teaspoonful doses three times a day. No compiaint was made by the patients with regard to its taste.

The two cases of chlorosis were benefited by the use of extract of bone marrow, the cases of pernicious anemia remained unimproved. "It is difficult to understand" says the author "how this remedy could be of service in cases of pernicious anemia. Its effects can hardly be considered as analogous to those produced by thyroid extract in myxedema. In the latter case there is atrophy of the gland, giving rise to defective secretion, so that there is an indication for attempting to supply this defect by the administration of thyroid extract But the marrow in pernicious anemia is, if anything, in a state of hypertrophy, and the condition is far more analogous to that of the hypertrophied and supposedly over active thyroid gland in exophthalmic goiter than to that of the atrophied gland in myxedema. Besides, there is no proof whatever that the marrow acts as a gland in the ordinary sense of the word. The formation of red blood corpuscles by the bone marrow can not be properly termed a secretion, it being rather a process of cell multiplication and development, and there is no proof that this process is influenced in any way by any chemical product of the marrow itself. As regards the cases reported by previous observers, two things may be noted. First, there is room for doubt that they were true cases of pernicious anemia. Second, the patients were given arsenic together with the bone marrow. Now it is well known that some cases of pernicious anemia do remarkably well on arsenic, and several instances of apparent cure have been reported. Such an improvement is shown in Case 3 of our series.

"It is different as regards the use of bone marrow in chlorosis. The marrow contains iron in considerable quantity, and we may reasonably suppose that the glycerin extract contains sufficient iron in organic combination to be of service in chlorosis, a disease which yields so readily to iron in almost any form. Whether its value in such cases is greater than that of the various forms of iron used in medicine is doubtful."

The author reaches the conclusion that the extract of bone marrow may be of value in ordinary anemia and chlorosis, such as would be benefited by iron in other forms, but that there is no proof of its efficacy in primary pernicious anemia.

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ABSTRACTS

MEDICINE.

A Case of Tobacco Deafness.—Dr. Pierre F. Spaink, of Apeldoorn, Holland, writes: "Among the poisons for the nervus acusticus, Politzer names tobacco as well as quinine, salicylic acid, morphine and chloroform. And also Dvorzak and Heinrich, who, under the auspices of Schroff, intoxicated themselves acutely by nicotine, enumerates dullness of hearing among their symptoms. The following case, in which the nervous data of the family are hemiplegia spastic infantilis of a sister and idiocy of a cousin may be of interest. J. P., aged 14, had become dull of hearing since four years; last summer he improved a little, but the next winter he deteriorated again, so that his family called him completely deaf. Inquiry learned that the left ear was nearly deaf, and the other one very dull of hearing. The membranæ tympani were normal. There was a slight catarrhus of the pharynx. No amblyopia. Sensorium intact. Pupil and patella reflexes present. Pulse without particularity. There was no loss of flesh or tremor, and all functions were normal. He smoked and chewed tobacco the whole day, so that the consumed quantity of tobacco, even at a rough guess, was not to be calculated.

"The severe prescription to use no tobacco at all, and to take much food, had the consequence that after three weeks he heard well again, which, after six weeks (February, 1894), still was confirmed. The boy, who had grown thicker meanwhile, in the beginning of May became dull of hearing again, and it was proved that he had chewed tobacco again during the last three weeks. New severe prohibition had the result that he now hears very well."—*Quartery Journal of Inebriety.*

The Real Value of the Medicinal Peroxide of Hydrogen Preparations Found in the Market.—H. Endemann, Ph.D., Chemist, formerly with the health Department of New York City, says:

My attention having repeatedly been called to several reports and analyses made by different chemists and published by some medical journals, I concluded to examine all the brands of peroxide of hydrogen which I could find on the market, in order to ascertain the real value of each when intended to be used as an antiseptic remedy, both internally and externally.

The reports on the subject which have come to my knowledge are quite contradictory, and my object is to impart to the medical profession the results of my experiments, which have been made on fourteen fresh samples, purchased by me in duplicate, directly from the manufacturers or their selling agents.

These brands have been tested for the volume of available oxygen, the amount of residue, the degree of acidity, and the amount of soluble baryta salts contained therein, as per following table:

NUMBER.	BRANDS.	Volume of Available Oxygen, determined by means of a solution containing 5.665 grms. of Permanganate of Potash per liter of distilled water.....	Residue obtained from 100 C. C. of Peroxide of Hydrogen dried at 120 degrees C.....	Acidity expressed in Cubic Centimeters of Normal Volumetric Soda Solution for 100 C. C. of Peroxide.....	Baryta found in Soluble Baryta Salts contained in 100 C. C. of Peroxide.....
1	John Bene's Peroxide of Hydrogen.....	10.50	0.1886	2.19	None.
2	Hydrozone.....	27.35	0.2180	3.11	None.
3	Larkin & Scheffer's Peroxide of Hydrogen Medicinal.	9.65	0.1206	6.75	None.
4	Malinckrodt's Peroxide of Hydrogen Medicinal.....	9 55	0.1408	1.43	None.
5	Marchand's Peroxide of Hydrogen Medicinal.....	16.55	0.564	1.29	None.
6	McKesson & Robins' Peroxide of Hydrogen Medicinal.....	10.95	0.0540	0.44	None.
7	Merck and Co.'s Peroxide of Hydrogen Medicinal....	0.50	0.2418	4.57	None.
8	Oakland Chemical Co.'s Peroxide of Hydrogen Medicinal....	10.50	0.0882	0.34	0.0017
9	Peuchot's Peroxide of Hydrogen Medicinal.....	10.60	0.4674	1.77	0.0018
10	Powers and Wightmann's Peroxide of Hydrogen Medicinal	8.40	0 0830	2.03	None.
11	Pyrozone, 3 per cent.....	11.20	0.0534	0.76	None.
12	Rosengarten and Sons' Peroxide of Hydrogen Medicinal.....	3.10	0.1002	1.25	None.
13	Smith, Kline and French Co.'s Peroxide of Hydrogen Medicinal.....	6.15	0.088C	2.6	None.
14	E. R. Squibb's Peroxide of Hydrogen Medicinal.....	13.40	1.004	12.04	None.

By referring to this table it is easily understood that sample No. 2, "hydrozone," is far superior to any other brand which has ever been made, not only on account of its containing a much larger amount of available oxygen, but also owing to the presence of a small quantity of several essential oils, the respective nature of which could not be determined, very likely because they have been submitted to the oxidizing action of peroxide of hydrogen before being used to make "hydrozone."

I attribute to this small quantity of essential oils the great superiority of hydrozone over any other brands of H_2O_2 as a healing agent.

When hydrozone is diluted with distilled water, in the proportion of half and half, the resulting mixture contains about 13.5 volumes of available oxygen, and its bactericide power still remains the same as the bactericide power of sample No. 5, which contains 16.55 volumes of available oxygen.

Sample No. 14 comes next to sample No. 5, but it is

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readily seen that the degree of acidity is entirely too large for a preparation which is to be applied to the most sensitive diseased mucous membranes.

Sample No. 11, called "Pyrozone" which contains 11.20 volumes of available oxygen, is quite similar to sample No. 6, with the exception that the latter contains a small quantity of the salicylic acid. Very likely the salicylic acid has for its object to increase the bactericide power, but, unfortunately, I fear that it impairs the keeping properties of this preparation.

ACIDITY.—The 14 brands which I have examined contain free acids (phosphoric, sulphuric, muriatic); and I must say that peroxide of hydrogen medicinal should never be made neutral before using, even in the most delicate cases. Neutral peroxide of hydrogen rapidly decomposes under all conditions of exposure.

The keeping properties of H_2O_2 solutions vary a great deal with the degree of purity and the percentage of free acids contained therein.

If the proportion of acid is too large, the profession well know that it acts as an irritant upon diseased surfaces. If it is too small, the solution don't keep well.

My opinion is, that a standard solution of medicinal H_2O_2 must answer the following tests:

1. It should contain at least 16 volumes of available oxygen.

2. The quantity of free acids contained in 100 cubic centimeters should require not less than 1 c. c. and not more than 3 c. c. of normal volumetric soda solution, to be made neutral. Such a small quantity of free acid is not objectionable.

3. It should not contain any soluble baryta salts.

4. It must be free from sediment.

It is to be noticed that the brands No. 7 and No. 12 are valueless.

The brands No. 8 and No. 9 are not fit for medicinal uses, owing to the fact that they contain traces of soluble baryta salts.

The brand No. 3 has a heavy sediment of sulphate of baryta, which may be considered inert towards the system, but it is certainly detrimental to the keeping qualities of this preparation.

Brand No. 14, which is sold as a ten volume solution, is really twelve volumes, but it is too acid. Brand No. 3, which is sold as a fifteen volume solu tion, is really 16 55 volumes, viz: About ten per cent above the standard.

The brand No. 2, which is sold without any mention of volume, is really a 27.35 volume solution, viz.: Ninety per cent above the standard.

None of the other brands come up to the standard, but on the contrary they run from 35 to 55 per cent below.

Deaf Mutism as a Clinical Study.—James Kerr Love (*Journal of Laryngology, Rhinology and Otology*) at the annual meeting of British Medical Association, Sec. Laryngology and Otology, August, 1894, read an interesting and valuable paper on deaf-mutism as a clinical study, which was ably discussed by Drs. Dundas, Grant, Warden, Johnson and Mr. Harsant. "Most ancient and many modern authorities fail to appreciate the case of the deaf-mute, and even now it is not easy to grasp exactly the essence of deaf-mutism. The absence or loss of hearing so stunts the development of human faculties, so completely detaches its victim from what is common to men, that the claim of the deaf-mute to be human at all has been questioned. His absence of speech has been supposed to depend on defective vocal arrangement, a stunted larynx, a tied tongue, or badly developed lungs. The average deaf-mute is a case of very defective hearing, of disease involving the internal ear, and nothing more; and this fact must not be lost sight of, either by the clinical observer or teacher.

"The clinical aspects of deaf-mutism may be studied either in young children who are losing their hearing, or in the finished individual as it exists in the deaf and dumb institutions. Neither of these classes has received attention from physicians which they deserve, and a large proportion of cases of acquired deafness have never had an aural speculum used before they entered an institution. The profession has never shaken off the popular fallacies about deaf-mutes:

"1. That they have been born so.

"2. That they are all quite deaf.

"3. Founded, to some extent, on these two, that they are helpless, defective characters, not capable of taking any useful place in society.

"It is a fact that most deaf-mutes are born hearing, and that few mutes are totally deaf.

"Cerebral inflammations, convulsions and fits cause a third of the acquired cases of deafness; measles, scarlet fever, and other infectious diseases account for another third; primary ear affections cause scarcely a tenth of the cases; hereditary syphilis is also worthy of mention as a cause.

"All children entering a school for deaf-mutes should have their ears carefully examined and their hearing tested, and foreign bodies removed, suppurative diseases properly treated, nose and naso-pharynx examined, and catarrh or any obstruction of breathing treated or removed.

"The highest blessing we can confer upon the deaf-mute is to give him back his means of converse with the hearing and speaking world. The author concludes with the following suggestions:

"1. In connection with every deaf and dumb institution should be an aurist, whose duty it would be to examine the ears and test the hearing of every child admitted. Medical men need not mix in the war about teaching methods, but should supply the information without which the best method can not be determined. Where the oral system is to be taught, surgery can do something to improve the articulation. Any treatment which promises improvement in hearing should be tried.

"2 Otologists should continue to direct the attention

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of the profession and of the public to the more careful treatment of diseases of the ear, and especially to those ear affections which complicate the exanthemata. Local authorities should include measles among those diseases to be compulsorily notified, for the disease is one of the most fruitful sources of deaf-mutism.

"3. Marriages among congenitally deaf should be discouraged or, if necessary, prohibited.

"4. The temporal bones and brains of deaf-mutes who die from whatever cause should be carefully examined and reports published.

"It is only by careful work on these lines that we can diminish the number of those on whom this terrible calamity of deaf-mutism has fallen, or ameliorate the lot of those who neither speak nor hear."

In discussing the paper Dr. Grant called attention to the results obtained by Professor Urbantschitsch, of Vienna, and published in the *Wiener Klinische Wochen schrift*, who has found a residuum of hearing power amenable to methodical cultivation in all cases of sup posed totally deaf (with deaf-mutism) that have come before him. He finds them soon able to appreciate vowels; later, consonants and words and sentences. The hearing faculty gradually increases, and the power of speech in those trained lip-reading is enormously improved. In addition to special instruction from a trained observer, the patients can exercise each other, and each can exercise at the same time his speaking and hearing by speaking into the bell of a long, flexible speaking-tube, the other end of which he places in his own ear.—*Medical Bulletin.*

Herpes Zoster in Children.—Herpes zoster is a most painful and fairly common disorder among children, and it may be of interest to briefly describe this as seen in our dispensary service here and at the Children's Hospital, and make a few observations on the means for its relief.

There ought to be little difficulty in recognizing zona or shingles. Nearly any old woman will do so with confidence and enlarge most graphically upon the hideousness of the pain and darkly hint at the deadly perils which beset certain forms, as when it, creeping along the costal nerves from the sensory spinal ganglia, tends to encircle the body in a deathly clutch. To be sure, it is nearly always unilateral, and while generally appearing on the "torso" and extending from the mid line of the back and, by way of the ribs, stretch outward toward the raphe of the belly; yet now and again these stinging little patches of vesicles appear here and there upon any portion of the body with apparent indifference, though recognizable along definite nerve lines.

Pain generally begins first, then red spots, which grow into vesicles, increasing rapidly in size and becoming flattened, and these may look like closely set drops of dew on a leaf or be scattered about. The earliest lesions are near the nerve roots—the later ones farther away.

The time occupied in establishing the disorder may be from three to ten days, but no limit can well be fixed for it to cease, which should be by drying up. But too often the lesions become broken and ulcerate, causing intense agony and possible scars.

One attack usually suffices, and it is a pretty forgetful child who fails to hold that one in vivid remembrance. It does recur, however, and one of the cases here described is a second attack. In older folk a residual neuralgia may remain and afflict for years, and of a most troublesome type. I knew one old lady who underwent at my hands systematic treatment for a long time, with less success, too, than I could wish. As to the primal causes, these are hard to learn. It seems to come as a special chastisement and for no known error. Learned authorities tell us that herpes zoster is most times a descending interstitial neuritis of the spinal ganglia, and Kaposi asserts it may be of cerebral, spinal ganglionic or peripheral origin.

Certainly one can, as a rule, readily recognize the progress of, and too rarely check, the disorder, moving adown the course of well known nerve distributions—the costal, the facial or, as in one of our cases, the external perineal. The spots become vesicles and grow in numbers and size day by day in a steady march and relentless vigor. How to check them we do not know. Relief is all we can count upon from present knowledge.

The first principle of treatment is to protect the surfaces from harm and the air; the second, to relieve the tingling burning pain, by applications. Internally, medicines are of small use, except when agony supervenes and opiates are demanded—not often in children, but in adults not seldom.

Briefly then, we consider the cases and the treatment used.

First, this child of 16 months, always very delicate, hand reared, eruption showed on both sides above the waist line, the vesicles so large, my assistant, Dr. Bryan, a man of large experience and good judgment, set down the case as probable varicella. These spread, however, and grew rapidly and so painful that the true condition stood revealed. The whole back, in two or three days, was affected, with lines reaching out toward the mid-line in front.

One side seemed to be a little worse one day but the other side out-stripped it the next. Soon the entire trunk was covered completely from neck to buttocks, and the agony so extreme as to make it necessary to give a little opium for a day or two. Then I devised a jacket of lint, shaped like a man's waistcoat, enwrapping the entire body, and on this was thickly spread the antipruritic ointment of acid carbolic, gr. v; menthol, gr. v; ungt. zinc oxid., ℥ss; ung. hydrarg. ammoniat, dil., ℥ ss. Made stiff by added dry zinc oxide, and spread so thickly that the air could scarcely get through. When this was applied, at once the child slept and was comfortable for several hours.

Next case, a delicate boy of 7, with Pott's disease of the spine, wearing a plaster jacket. He suddenly began to suffer pain and we thought his kyposis had become

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irritated by pressure, so I cut the support in front, and lifting it off, observed a wide patch of zona about the left short ribs. The ointment, as above, was used on the spot, and the jacket replaced and laced up, and comfort at once admitted.

A girl of 11, stout and strong, never ill, came with a "burn" on her chin to the left of the mid line; there was no history of exposure to fire (a mystery) and a patch of shingles was recognized and treated by menthol and collodion.

Another, a boy of 12, robust; painful eruption over head of left fibula. Neither this nor the one above extended largely.

A big boy of 16, a patient here for various slight disorders since babyhood, came, saying he had "erysipelas on his backside, and it hurt so he couldn't sit down." A vast area of zona shown.—Madison Taylor, M.D., in the *Philadelphia Polyclinic.*

Diphtheria Antitoxine.—Dr. Reynold W. Wilcox contributes the following five abstracts from foreign medical journals in the *American Journal of Medical Science:*

1. Mr. Hunter Urquhart Walker reports a single case. He made use of the Behring solution, which contains 2 to 2.5 per cent of egg albumin and 0.4 per cent of tricresol for preservative purposes. For the immunization of adults and older children fifteen drops of the solution is injected subcutaneously by means of a Pravaz syringe, which has been previously sterilized by alcohol, and 8 per cent of a carbolic acid or 1 per cent of a tricresol solution. For young children up to two years the dose should be one-half of the quantity. To persons who are threatened by diphtheria at least ten times as much is required to render them immune. The patient was a girl of 8 years of age, who had been ill for a day or two before being seen. After three days' treatment with iron and potassium chlorate internally, and the constant use of lime-water spray, the membrane was well formed, even extending well over the soft palate and hanging down into the mouth. Eleven minims of antitoxine was injected into the forearm, with strict antiseptic precautions. The temperature at that time was 103° F., and the pulse 140. In four hours there was no fever, and the pulse was quite quiet; it was necessary to rouse the patient to receive nourishment, which throughout consisted of beef tea, chicken soup, brandy and milk, and wine whey. On the following day the same improvement continued, although the membrane was still present; it was apparently loosening on the right side. During the day much of the membrane came away. On the next day the membrane had entirely disappeared, the temperature was normal, and the pulse good; there was no pain. The injection was entirely innocuous, being followed by neither local nor general disturbance.—*The Lancet*, 1894, No. 3710, p. 791.

2. Mr. Athel T. Saw reports six cases upon which the operation of tracheotomy was performed, which upon admission to St. Mary's Hospital were apparently cases of ordinary severity. No antiseptics were applied to the pharynx, but the wound was sprayed with a 1 to 1000 solution of corrosive mercuric chloride. The ages were 11, 17 months, 5, 5½, 6 and 7 years; the first was fatal. After the fourth or fifth day the membrane, which previously had come up abundantly through the wound, ceased and the wound was allowed to close. In none of the cases did the wound become unhealthy, neither was there any cellulitis of the neck, although on two occasions the neck showed signs of swelling on the morning after the operation. By the third or fourth day after the operation the patient's general condition had completely changed; they were bright, took interest in their surroundings, and played with their toys. The fatal case was moribund when admitted, the operation was performed without an anesthetic, the patient not stirring, and death occurred on the following morning. On necropsy it was found that the membrane extended into the secondary divisions of the bronchi. The previous twelve months' mortality in tracheotomy for laryngeal diphtheria was 30 per cent. In twelve years no child under 2 years of age had been saved. Aronson's antitoxine in ten minim doses was injected, with antiseptic precautions, subcutaneously at twelve-hour intervals for three days. In no case was there inflammation at the seat of the injection.—*The Lancet*, 1894, No. 3711, p. 851.

3. Dr. A. MacGregor reports one case. A boy of 10 years, ill for two days, was found to have the left tonsil covered with a greenish-gray membrane, with marked glandular enlargement at the angle of the jaw on that side. Fifteen minims of the tincture of ferric chloride was given every four hours and the throat brushed every hour alternately with boric acid in glycerin, 1 to 8, and strong Condy's fluid and water. Port wine and brandy were given freely. During the next two days the membrane continued to spread until it covered the tonsil, half of the pharynx, the soft palate and the uvula. The pulse was 120, the temperature 99° F.; the breathing was labored, there were no laryngeal symptoms; his aspect and general condition indicated rapid collapse and death before many hours. Schering's serum was used, fifteen minims injected into the muscles of the back. Relief followed quickly, and convalescence was established in nine days.—*The Lancet*, 1894, No. 3714, p. 1027.

4. Mr. Ernest Hart states that there is a fairly complete record of thirty-six English cases within the past three months, with two deaths. It is impossible to run over this record without being strongly impressed with the fact that we have in diphtheria antitoxine a substance which has a marked influence on a most serious and fatal disease. What is now wanted is a standard preparation. So far it would appear that the exact dose is not a matter of extreme nicety; but it is difficult to believe that a substance capable of so modifying the susceptibility of the body to the diphtheria toxin will not have also considerable effect in other ways. Both

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for the sake of economy and safety no more should be used than is necessary, and a standard preparation ought to be available. It would be a great scandal were the market to be flooded with competing brands of such a substance, produced by different firms, at "cutting" prices; and if the public, when in peril from diphtheria, were to be exposed to the added danger of being infected with bad antitoxines.—*British Medical Journal*, 1894, No. 1764, p. 889.

5. M. Martin after giving briefly the method of preparing the antitoxine and the technique of its injections, presents certain facts in regard to its employment. It probably does not act injuriously upon the kidneys; but, on the other hand, it appears to protect them against the diphtheria poison; while in two-thirds of the cases of benign diphtheritic angina albumin was found; in the same anginas treated by antitoxine it did not occur in more than one-half of the cases. As for local treatment, it is not necessary to employ it when the antitoxine is used. Inasmuch as corrosive mercuric chloride destroys the diphtheritic poison, it may, perchance, destroy the antitoxine, and thus the bad results with local treatment may be accounted for. Roux has used equal parts of menthol and powdered camphor, which liquefy on mixing, and so are easily prepared for application. However, no local applications are excluded save those which interfere with the action of the antitoxine, of which corrosive mercuric chloride is mentioned above, and phenol is the second.—*Le Progres Medical*, 1894, No. 42, p. 249.

Conjunctivitis—Acute and Chronic.—This is, perhaps, one of the most obstinate forms of acute or subacute conjunctivitis to deal with, unless the cause is appreciated. It is best in all cases of conjunctivitis te examine the tear passages and ascertain their condition. If there is obstruction, treat the nasal end of the lachrymal duct by sprays or powders, and use mercuric bichloride (1 to 8000) on the conjunctival cul-de-sac. If this does not remedy the lachrymal obstruction, then open the canaliculus by the Bowman operation, thus giving free drainage. This, with the use of the antigermicide, will cure the condition. These cases, treated in the ordinary way by the application of astringents to the eyelids, will, as a rule, avail nothing, but speedily respond to the treatment outlined above.

Nasal conjunctivitis, by which we mean inflammation of the mucous membrane of the eyelids, due not to obstruction of the lachrymal duct, but to an interference in the free nasal breathing and ventilation of the head through the nose, due in most instances to a hypertrophic rhinitis, and, perhaps, to enlarged turlenated bodies. The symptoms of these cases persist even when the most approved methods of treatment have been used for simple conjunctivitis, and the redness of the eyelids and the blepharitis only gives way when the nasal obstruction and rhinitis is under control. We could cite many cases where this cause had been overlooked, and which speedily recovered on the treatment of the nose and throat.

Traumatic conjunctivitis is frequently met with as the result of the injury of the mucous membrane by the entrance of foreign substance, and which speedily gives way on the removal of the exciting cause. After exposure to the sun's rays, on the impact of air in sailing or rapid driving, we frequently observe a form of conjunctivitis, which we justly call traumatic. We have all seen, doubtless, the conjunctiva sun-burnt and air-inflamed. For these forms we use the application of cold compresses ten minutes at a time, four times a day, together with protecting colored glasses and moderate out door exercise; in fact, most all the simple forms of conjunctivitis do much better in the air than when housed. Occasionally, in traumatic conjunctivitis, with moderate secretion, an eye lotion of alum and boracic acid, three grains each to the ounce of water, will be found efficient and soothing. Electric-light conjunctivitis comes under this class, and is now quite often seen, especially in those engaged in works where the arc light is used. Protection of the eyes by colored glasses and abstinence from the usual employment for a few days will usually rectify this difficulty.

In the treatment of all the forms of simple, acute, or subacute conjunctivitis, we are in the habit of prescribing applications to be made to the closed eyelids of cold water, by means of cloths or pieces of old linen. These, dipped in cold water, or better still, placed on a piece of ice and then transferred to the eyelids, make a very soothing and beneficial form of treatment. Then a solution of alum and boracic acid, as mentioned above, is given the patient to use at home, two drops in each eye, twice daily.

Purulent conjunctivitis is the most serious of all the inflammations of the membrane we have to deal with, and we know of nothing more sad than the picture so frequently seen of the helpless infant, but a few days old, presented for our care, with both corneæ infiltrated, the eyelids bathed with pus, and the eyes hopelessly destroyed, when, if the appropriate remedies had been used, the child would have been saved a lifetime of misery. Another form seen in the adult is the purulent conjunctivitis caused by the germ of gonorrhea—an exceedingly disastrous inflammation, and one that will destroy the eye within forty-eight hours unless treatment is very promptly inaugurated. The eyelids are very much swollen, and the skin red and glossy, and the secretion copious. In either the infant or the adult, if only one eye is affected, the non-affected should be protected and shielded from inoculation by means of "Buller's shield," which is simply a watch crystal held in position by means of adhesive plaster. Thorough cleanliness is godliness in this instance, and should be rigorously carried out; in fact, this class of patients should only be treated as in-door patients, and then isolated. All things used in removing the secretion from the eyelids should be promptly incinerated, and thus all further danger of contagion removed. The eyes should be cleaned as often as the secretion accumulates—every half hour, if necessary. The eyelids should also be

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opened and the secretion removed by the use of a small syringe, injecting through the cul-de-sac and over the eyeball a solution of mercuric bichloride (1 to 8000), in order to cleanse and, at the same time, act as an antiseptic. If the secretion is considerable and there is not much bleeding from the palpebral conjunctiva, applications should be made by the medical attendant to the everted eyelids of a solution of silver nitrate, ten grains to the ounce of water. This should be in many cases applied twice daily, and continued until the secretion begins to diminish, when the strength of the solution may be reduced to five grains and the applications made once daily. It is extremely important that applications of iced cloths should be kept up in the adult continuously for the first few days and in the infant as frequently as tolerated. The best way is to take a large piece of ice, wrapped in flannel, and upon this place small squares of old linen, and when they are thoroughly cold transfer them to the closed and inflamed eyelids. When the cold becomes too intense, the applications may be interrupted for a time, or when the cornea shows signs of lack of nutrition, they may be altogether omitted, and even warm compresses applied; this, however is rare. After cleaning and making the silver-nitrate applications, it is best to fill the conjunctival cul-de-sac with vaseline, as it has been found to lessen the secretion and probably render the propagation of the germs more difficult.—Moore, in *Post Graduate*

Lysidine (methylglyoxalidind), $C_4H_8N_2$, is chemically identical with A. W. Hoffman's ethylene thenyldiamine. Ladenburg has discovered a procedure by which it can easily be obtained,—by the dry distillation of sodium acetate, and ethylene-diamine hydro chlorate. It is described as a hygroscopic; crystalline, strongly alkaline substance, of a pinkish color, evolving an odor of mice, melting at 105° C. (221 F.), and readily soluble in water.

Lysidine is considered a five times stronger solvent of uric acid than piperazine, and it is non-toxic, as experiments on animals appear to have proved.

The author's recent experience with lysidine in two patients seems to show that this substance is a valuable remedy in treating the uric-acid diathesis.

One of the patients was afflicted with an attack of acute gout. The left big toe was very red and greatly swollen, the least movement producing intense pain. There were also observed abnormal thickening of the articulations of the fingers and tophi on the plantar part of the right big toe, and on the free margin of the right auricle. The remedy was administered in half a litre (1 pint) of seltzer water per day. The patient took 1 gramme (15 grs.) on the first day, 2 grammes (30 grs.) on the second day, and 3 grammes (45grs.) on the third day, 5 grammes (75 grs.) on the fourth day, and 2½ grammes (38 grs.) on each of the next two days, after which the treatment was discontinued, because the supply of the remedy had been exhausted.

Under the influence of this medication, a considerable decrease in pain and in the swelling of the affected toe was obtained. But the temporary discontinuance of the lysidine led to a recurrence of all the acute phenomena. A daily dose of 5 grammes (75 grs.) was then prescribed. As a result, the swelling of the toe almost completely disappeared, as early as on the second day; and there was no trace of the affliction after the fifth day—most energetic pressure and even forced movements did not cause the least pain.

The other patient presented marked manifestations of chronic gout. There were rather large tophi at the articulation of the fingers, the right tendo-Achillis, the auricle and the free border of the epiglottis. The patient complained, besides, of pain in the articulation of the left shoulder and right leg.

He was first treated with lithium salicylate and alkalies, but without success. Lysidine was then administered in doses gradually increasing from 1 to 5 grammes (15 to 75 grs.) a day. From the fifth day of this treatment, when the dose of grammes had been reached, there was seen a diminution in the size of the tophi. The patient was able to leave the hospital after 25 days of treatment. The movements in the great articulation were then entirely painless; the tophus of the epiglottis had disappeared, leaving a small, smooth scar; and the remaining gouty swellings had greatly diminished in size.

The author administered lysidine alse to a person afflicted with acute articular rheumatism, without, however, obtaining any remarkable therapeutic effect, while antipyrine brought on a rapid cure in this case.

According to the author, lysidine was always well tolerated, and did not provoke digestive disturbances or albuminuria; the taste of the medicament is not disagreeable, especially when the remedy is taken in iced carbonic acid water.—Dr. E. Grawitz in *Sem. Med; Amer. Med.-Surg. Bull.*

Lymph Cells.—Nuclein plays an important part in the lymph cell, which is almost filled by the nucleus. It is a protein (a compound of an albumin with organic or inorganic substances) produced by the action of an organic phosphorous compound, the nuclein acid, upon albumin.

In the nuclei of cells the nuclein acid and the albumin are in a state of combination in the resting stage, and in the stage of mitosis the acid is split off and becomes free.

This is shown microscopically by Ehrlich's stain, which is a mixture of a basic stain (methyl green) with an acid stain (acid fuchsin); the albumin takes up the acid stain and the nuclein acid takes up the basic stain. Posner and Lilienfeld showed this reaction in the case of albumins, and in a specimen of nuclein acid prepared by Kossel, Lilienfeld found that the nuclein acid was stained green, and the histon was stained red, and in a mixture of the two color is mixed; in very acid nuclein it is of a greenish blue; whilst in neutral nucleo-histon it is rather violet.

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In the resting stage the nuclei of lymph cells are stained so that violet predominates, whilst in mitosis and other physiological conditions the free nucleus acid causes a predominant greenish tint when Ehrlich's mixed stain is used.

The conditions under which the compound formed by nuclein acid and albumin remains stable, are not known; that they vary, however, in different organs, is shown by the fact that 1 kilogramme of thymus gland affords 25 gme. of nuclein acid, whilst 1 kilogramme of the spleen only gives 5.4 grammes.

Organized matter placed in solutions of the nuclein acid soon becomes opaque and dies, owing to the action of nuclein acid on the albumin.

H. Kossel showed that a solution of nuclein acid (0.5 per cent) killed cholera bacilli in a few minutes, streptococci and staphylococci in a few hours, and also typhoid bacilli. Acetic acid of the same strength did not act so quickly. The presence of albumin made the action slower, but did not stop it.

To obtain the nuclein acid without causing a profound chemical change, it was found that the lymph cells were the best source.

Thus the nuclein acid must play a part in phagocytosis.—H. Kossel in *Deutch. Med. Woch.; Amer. Med.-Surg. Bull.*

Pathogenic Germs in the Embryo.—In the Section of Pathology at the Eleventh International Medical Congress, Prof. Maffucci, of Pisa read a paper on Pathogenic Germs in the Embryo, which presented many points of interest, reinforced by practical work. He said that as embryos offered conditions morphologically and physiologically different from those of adults, is was probable that they would react differently when stimuli of infection were applied to them. He had inoculated the eggs of fowls with different species of germs—fowl tubercle, fowl cholera, etc. Some of the eggs were inoculated at the beginning of the sitting, others at different times while the hen was sitting He made, subsequently, a histological analysis of the albumin and of all the embryonic tissues. He had further made cultures from this albumin and tissues, and had inoculated animals with the cultures. He had also left a series of the embryos to hatch and to grow for some time for the purpose of observing the results of the inoculation made during the embryonal life. After drawing a series of conclusions from his experiments upon the embryoneal life of the fowl inside the egg, he made similar researches on the rabbit. He inoculated mammalian tubercle into the jugular vein of pregnant rabbits. Some of them were kept alive until delivery, whilst others were killed and their tissues were inoculated into guinea-pigs. In male rabbits bacilli were found in the sperma before change appeared in the testis; some of the inoculated males were allowed to impregnate the females. From the offspring of these tuberculous parents guinea-pigs were inoculated. Others were kept for one year in order to observe the amount of infection contracted during the act of conception. Prof. Maffucci drew many conclusions from these experiments. Among others, he considered that the living embryo does not allow of the development of pathogenic microorganisms in its tissues except under exceptional conditions. The micro organisms may be destroyed or attenuated, or may be stored up in such manner as to develop in the creature after hatching. Some viruses which do not act pathogenically in the adult fowl may act so in its embryo.—*Lancet; Amer. Med.-Surg Bull.*

Bulbar Palsy and Motor Aphasia Following Influenza.—Stembo reports two cases. In one case speech became difficult, fluids imbibed returned through the nostrils, saliva accumulated in the mouth, and there was dysphagia. Movement of the lips and enunciation of the labials were alike impaired. The tongue was small, tremulous on protrusion, and furrowed longitudinally. The uvula was deflected to the right. The left posterior cricoarytenoid muscle was paralyzed, affecting also the left vocal cord. The voice was hoarse and nasal. The muscles affected showed diminished electric, but heightened muscular, irritability. The second case occurred in a woman eight months pregnant, some time after influenza. There was paresis of the right upper extremity, inability to speak, although the patient heard and understood what was said. The face was distorted, the mouth drawn to the left, the protruded tongue deviated to the right, and the uvula to the left. The voice was horse. An ulcer was found in the inter-arytenoid space, with paralysis of the left vocal cord. There was dulled sensibility on the right side of the face and in the right upper extremity. The tendon reflexes were somewhat increased, the cutaneous reflexes were normal. The patient gradually improved, and the faculty of speech returned. In the first case the bulbar lesion was ascribed to the influence of toxines engendered during influenza; in the second case, probably a hemorrhage took place into the lower portion of the ascending frontal convolution, whilst the laryngeal symptoms were ascribed to the local ulcer.—*St. Petersb. Med. Woch.; Brit. Med. Jour.*

A Fatal Case of Uncomplicated Chicken-Pox.—The *Australian Medical Journal* for November 15, publishes an article by W. B Nisbet, M.B., Ch.M., Ed., of Townsville, Queensland, in which he remarks that it appears to be a generally accepted fact that varicella is such a trivial disease that no treatment is required, and, as complications are extremely rare, no precautions are necessary to prevent their occurring. West writes, says the author, "The disease is one so void of danger that it hardly requires any treatment;" while Collie, in Quain's *Dictionary of Medicine*, says, "No physician has recorded a fatal case of chicken-pox." For this reason, says Mr. Nisbet, the following case is recorded, which might otherwise seem too trivial to be worthy of note: A healthy baby girl of eight months showed signs of the eruption of the chicken-pox on

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September 30, 1894. Four older children in the house also had it, and an epidemic of the disease was running through the town at the time, so the diagnosis was a matter of no difficulty. For the first three days the case progressed in the ordinary way, the rash being by no means copious and the constitutional disturbance unimportant. But on the fourth day a new crop of vesicles made their appearance, and were so numerous that by the sixth day every part of the child's body was covered, even the soles of the feet and the palms of the hands. The eruption showed no tendency to become confluent, except over the back, which was constantly rubbed by the restless movements of the child. On the seventh day numerous spots appeared on the tongue, on the hard and soft palate, and on the inside of the cheeks; these changed to irritable ulcers on the ninth day, causing great distress, and on the morning of the tenth day the child died, without any other complication making its appearance. The temperature remained at or about 102° F. during the illness, only once, on the evening of the fifth day, reaching 103°. It fell to 98.8° on the ninth day and remained normal up to the time of death.

Mr. Nisbet thinks that death was owing to the immense area of skin involved, in the same way as a very extensive burn causes death from shock in a child. The exhaustion evidently was so great that at the crisis of the disease, when the temperature fell to normal, no amount of artificial stimulation could avert the fatal issue.—New York *Medical Journal.*

SURGERY.

A Death From Edema of the Lungs Following Ether Narcosis.—Poppert (*Deut. Med. Woch.*) roports a case of death after ether anesthesia in a previously healthy man of forty-six years, who was operated on for an irreducible inflamed hernia. The operation disclosed an abscess cavity in the hernial sac; the radical operation was, therefore, postponed, and the cavity made aseptic and drained. The duration of the narcosis was about one half hour, and the amount of ether used four and one-half ounces. It was administered by means of a Czerny and then by a Julliard's mask, consequently it was not concentrated, and at no time was the patient very deeply under. The radial pulse was slow and regular, the breathing was deep and regular, vomiting of mucous occurred during the anesthesia, and mucous rales were present at the end of the narcosis, though not very marked. The patient recovered consciousness quickly, there were no respiratory symptoms observable for the first hour after the anesthesia, then, however, suddenly the breathing became difficult, loud bubbling rales were heard, and the patient had to cough up a large amount of thick mucus. The pulse remained normal, the patient was perfectly conscious, and it was thought to be only an excess of salivary secretion. The condition, however, became rapidly worse; despite the injections of camphor, the heart's action failed, the patient became more and more cyanotic, and a reddish froth came from the nose and mouth. Death followed, with these marked symptoms of edema of the lungs, two hours after the end of the anesthesia.

The post-mortem, made the same day, showed a fibrinous peritonitis with adhesions and suppurating foci, and an enormous edema, especially of the lower lobes of the lungs. After a careful consideration of the condition found, the author ascribes the death to a post-ether narcotic edema of the lungs. The study of this case, and the literature on this subject, leads the author to the following conclusions:

Death occurring during or after ether narcosis from edema of the lungs is caused by the toxic action of the ether, as are also the majority of cases of post-anesthetic bronchitis and broncho pneumonia.

Death during anesthesia is less frequent with ether than with chloroform, but the late deaths due to the anesthetic are more frequent with ether.

Anesthesia statistics should include late deaths as those during operation, especially all cases that cannot be accounted for by the disease present.

The statistics collected up to the present time (*i. e.*, Gurlt's) have not established the claimed superiority of ether over chloroform.—*Amer. Jour. Med. Sciences.*

The Danger of Apoplexy During Narcosis in Elderly Persons.—Senger (*Deut. Med. Woch.*) calls attention to this danger during the narcosis of elderly people, especially in those cases where there is marked arterial sclerosis. He believes this accident has occurred in many cases where the diagnosis has not been made. He finds no such cases reported in anesthetic statistics or in the literature at his command. The case reported is as follows: A patient, fifty-six years of age, suffered from sarcoma of the breast, and healthy kidneys and heart, and her pulse was normal; the arteries, however, showed sclerosis. During the anesthesia there was no marked excitation, although there was some vomiting. Suddenly, while the face had been red, it became deadly pale and cold, the eyes fixed and expressionless, the pupils dilated and reactionless; the pulse could not be felt. The respiration, at first marked, became shallow and gasping, and then ceased altogether for a moment. Although the symptoms pointed to a centric and non-respiratory source of troubles, the author immediately began restorative measures, artificial respiration, external heat, and all the most approved means. After a short time the pulse and respiration again became normal, more chloroform was given, and the operation completed. When the patient recovered from the ether she complained of stiffness in the right leg and arm, and difficulty in speaking, which proved to be a partial hemiplegia of the right side, which had occurred during the narcosis. Clonic spasm followed after a time in the lower extremity, but not so markedly in the upper, while the patient complained of cold in the foot. After six days the motion returned in

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part to the arm, but there was a relapse; when the patient left the hospital there was still considerable lameness, the leg having been slower in recovering. Two years latar the paralysis had mostly disappeared, the foot dragging only slightly. The author believes this danger is greater with ether than with chloroform, as the arterial pressure is sustained longer in the former, and that consequently in elderly people with sclerotic arteries chloroform should be the anesthetic of preference.—*Amer. Jour. Med. Sciences.*

Cyst of the Auricle.—Dr. H. H. Spiers reports the following interesting case in the *Lancet-Clinic:*

W. T., age 52; health and history good; called at my office to receive treatment for a tumor of the right ear. On inquiry it was learned that about four months previous to the call he had noticed a hard swelling, which gradually grew until present size. Had at no time been soft. Did not remember injury on that side. On examination the tumor was found to involve the helix, upper part of antihelix and the fossa between them. The enlargement was so dense as to seem of a fibroid nature.

My first impression was that it must be removed by incision. As a tentative procedure I introduced a small aspirator needle and withdrew about a half ounce of thick, reddish colored fluid, which, except as to color, resembled laudable pus. Reversing the syringe two drachms of ethereal tincture of iodine, strength ʒi to ℥i, was injected. No other treatment. Two months later, a perfect cure.

On looking up the authorities, I find Burnett says: "Injection of the cavity with iodoform and ether I have attempted in one instance, without marked benefit, and aspiration in my hands has not proven as efficacious as a more radical operation." Speaking further, the operation consists of incision, suture of wound, drainage and in some cases bandage with compression.

The Treatment of Cholera with the Blood-Serum of Convalescents.—Freymuth (*Deut. Med. Woch.*) has reported four cases of cholera, three of which were treated with blood-serum from convalescents from attacks of cholera. They occurred in a man seventeen years old, who had been sick twenty-four hours, in two women thirty-five and eighteen years old, respectively, who had been sick for six or eight hours, and in a man forty five years old. All had subnormal temperature, and vomited incessantly. The stools had the characteristic rice water appearance; the eyes were sunken; the nose pointed; the extremities blue, marbled, and cold; the skin elevated in folds; the pulse inappreciable; the voice hoarse and rough, with anemia, cramps in the calves, and jactitation. In the first case, warm applications; repeated subcutaneous injections of camphorated oil; the administration of ice and champagne; subcutaneous infusion of physiological salt solution were practiced, but after the lapse of some twelve hours the young man succumbed. It was now concluded to treat the remaining cases with the blood-serum of convalescents from attacks of cholera, and two patients who had recovered four weeks before volunteered. The blood thus obtained, after standing twenty-four hours in an ice-chest, yielded 40 c c. of clear serum, of which, in the second and third cases, 10 c.c. were injected subcutaneously upon the third day, 30 c.c. upon the fourth day, and 50 c.c. upon the fifth day. Death took place in the one case on the sixth day, and in the other 30 c.c. were also injected on the seventh day, and this case progressed to recovery. In the fourth case an injection of 20 c.c. upon the fourth day was followed by rapid improvement, which led to final recovery.—*Amer. Jour. Med. Sciences.*

Diagnosis Between Quadrigeminal and Cerebellar Tumor.—In the July number of "Brain," 1889, Nothnagel contributed a paper on the diagnosis of tumors of the corpora quadrigemina, and concluded that in a case presenting symptoms of cerebral tumor the growth can be localized to the region of the corpora quadrigemina when the following group of symptoms is met with:

1. An uncertain, staggering gait, especially if it appears as a first sympton.

2. Associated therewith ophthalmoplegia implicating both eyes, but not quite symmetrically, and not all the muscles in the same degree, the superior and inferior rectus being especially affected.

With reference to the differential diagnosis of tumors of the corpora quadrigemina, Burns reports two cases of brain tumor. The first was one of tubercle of the corpora quadrigemina. The chief symptoms were optic neuritis, vomiting, stupor, bilateral ophthalmoplegia externa without affection of the external recti, cerebellar ataxia on standing and walking, ataxia on movement or intention tremor of the hands. In the second case the symptoms were somewhat similar, and yet a sarcoma of the cerebellum was found at the autopsy. These symptoms were optic neuritis, headache, vomiting, slight stupor and comatose attacks, bilateral but not quite symmetrical ophthalmoplegia with affection of the external recti, cerebellar ataxia.

Hence the author concludes that the combination of a bilateral ophthalmoplegia with ataxia is not pathognomonic for the diagnosis of a lesion of the corpora quadrigemina, but can occur, also, in tumors situated elsewhere—for example, in the cerebellum. Perhaps, however, the onset of the symptoms, with ataxia and the preponderance of this symptom would indicate a lesion of the cerebellum, and the beginning of the symptoms with ophthalmoplegia and the preponderance of this symptom would indicate a lesion of the corpora quadrigemina. Limitation of the ophthalmoplegia to the oculo motor and fourth nerves would be more in favor of a lesion of the corpora quadrigemina. Implication of the sixth nerve may occur in both cases. Paralysis of other cranial nerves from the abducens downward would point to an affection of the cerebellum. Inten-

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tion tremor and choreic movements would be in favor of a lesion of the corpora quadrigemina.—Bruns in *Arch. f. Psych; Manchester Chronicle.*

The Mechanical Treatment of Chronic Constipation.—Dr. F. Le Marinel believes that the mechanical treatment should be the treatment of choice in a large number of forms of chronic constipation. The maneuvers of massage comprise three forms—frictions, pressures and percussions. In addition, various active and passive movements are undergone—flexion, extension, abduction, adduction, pronation, supination, rotation and circumduction. The effects of medical gymnastics are studied as regards the circulation, respiration, animal heat, chemical phenomena, the muscles, bones and articulations, and the local results. The effect of massage upon the absorption, muscular system, nervous system, circulation and local temperature are fully recorded (*The American Journal of the Medical Sciences*). The technique of various authors is fully described and illustrated. The various forms of constipation which are likely to be benefited are:

1. From anesthesia of mucous membrane.
2. From muscular paralysis.
3. From induration of the stools.
4. From mechanical obstacle.

The contraindications are:

1. Acute inflammation of intestines, peritoneum, peri-intestinal cellular tissue, or of intra-abdominal veins.
2. Ulcerations (round, tuberculous) of stomach or intestines.
3. Tumors of the alimentary canal (sarcomata, carcinomata, polypi).
4. Voluminous fecal masses of stony hardness.

An interesting comparison is given of the value of diet, habit, purgatives, hydrotherapy, injections, electricity, various medicinal methods, with that described by the author, the general conclusion being that of all these methods only one can be compared to the mechanical, and that one is electricity. But when one considers the question from the standpoint of success, massage shows figures which are not surpassed by electricity. So far as facility of application, massage is superior in that it does not require any apparatus, and can be applied equally well at the house of the patient as of the physician. Further, massage is better borne than electricity, and particularly by children. A series of 147 cases is reported, the treatment being that advocated in the paper. The care shown in the report, the apparent accuracy of diagnosis, the fulness of detail, give an especial value to the clinical histories. In the cases cited, those of the synoptical table, and eleven in detail, 158 in all, radical cure was obtained in about ninety per cent. The final conclusions are:

1. Mechanical treatment takes rank among those therapeutic agents whose action is most energetic upon the circulation, the respiration and general nutrition.
2. It can modify the abdominal circulation and cause certain foreign congestions, notably those which are met with in abdominal plethora, to disappear.
3. Under its action the muscles acquire an increase in volume and strength.
4. It is the best curative agent in constipation dependent upon muscular paresis or paralysis, if it is not of central nervous origin.
5. It is the best curative agent for constipation dependent upon diminished sensitiveness, or anesthesia of the mucous membrane when it is due to local causes.
6. Finally, it is formally contraindicated when constipation is due to acute inflammatory lesions or to tumors.—*Medical Record.*

OBSTETRICS AND GYNECOLOGY.

Etiology of Melena Neonatorum.—Preuschen (*Centralbl. f. Gyn.*) alludes to the unsettled state of opinion which exists with reference to the cause of gastro intestinal hemorrhages in the new born. Hemorrhagic diathesis, anatomical lesions of the vessels, fatty degeneration, heredity, too early ligation of the cord, swallowing caustic amniotic liquid, and fetal gastritis, have all been evoked in explanation. Landau attributes the hemorrhages to arrest of the first inspiration, causing embolism of a gastric or intestinal artery. Recently, Gaertner, finding the same micro organism in two cases, has suggested the possible bacterial origin of the malady.

A case of melena recently occurred in the practice of the author in a child delivered by forceps. This, together with the statement by Schiff that certain intracranial lesions may induce softening and hemorrhages of the gastric mucous membrane, suggested a possible etiological relation between the gastro-intestinal hemorrhages of the new born and cerebral injuries sustained during birth. He accordingly in conjunction with Pomorski instituted a series of experiments which resulted in demonstrating the relation in question. The observations were made on rabbits. A minute quantity of a saturated solution of chromic acid was injected into different regions of the brain in different animals. The hardening produced by the chromic acid and the green discoloration served to locate the seat of the injury. Melena followed injections in the most diverse regions of the brain. Within an hour after the injection hemorrhages were found in the gastric mucosa, or in the lungs, or both. In the stomach they were observed most frequently at the cardiac end and at the greater curvature. When the animal survived the infliction of the injury for a short time the mucosa overlying the extravasation disappeared and blood was discharged into the cavity of the stomach.

In searching the literature of the subject the author finds only 5 out of 37 reported cases of melena neonatorum in which the brain was examined and even in

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these not minutely. In three cerebral hemorrhages had been noted. In two cases examined by the author a similar condition existed.

These intra-cranial hemorrhages, the author observes, are by no means rare, even in spontaneous births. They must be much more frequent in difficult labors.

Albuminuria of Pregnancy as a Cause of Death of the Fetus.—"Trans. Soc. d'Obstet., de Gyn. et de Ped. de Bordeaux."

In twelve cases of the albuminuria of pregnancy recently observed by the author all the children were born in bad condition, only five of them surviving. In six the death was directly traceable to the toxemia. In four cases multiple hemorrhages had occurred into the placenta. These patients all came to him, however, in advanced stages of uremic intoxication.

Speaking of the frequency with which these hemorrhages are observed in albuminuria the author mentions an instance in which the weight of the clots equaled that of the placenta itself. He emphasizes the importance of early treatment, and especially the use of the milk diet in the interests of the child as well as the mother. In 250 cases recently studied by Bridier there was a fetal mortality of 20 per cent notwithstanding some treatment. The much larger mortality in Oui's cases, in which the milk diet had not been employed, is significant.

The induction of premature labor, the author thinks, is indicated only after the milk treatment has failed to relieve the symptoms.

In the discussion, Chaleix laid stress on the importance of diuresis for the elimination of the toxines In his hands the hypodermic injection of the physiological salt solution in large quantities had, in conjunction with the use of milk, given through a stomach tube when the patient was unable to swallow, proved of marked service in desperate cases. The quantity of urine was increased, and both the maternal and the fetal condition improved.—Brooklyn *Med. Jour.*

Curative Effect of Baths in Diseases of Women.—The treatment by baths plays an important part in gynecology, especially in the class of cases characterized by exudates of the pelvic peritoneum. What is ordinarily meant by the term exudate may be divided from a pathologico-anatomical standpoint into two forms: (1) The true serous, fibrinous or purulent collections in the pelvic structures; and (2) The peri- and para-metric connective tissue bands and cicatrices, which must be regarded as the results of the other group. While the treatment of the first class of cases by balneotherapy shows most brilliant results, even an absolute *restitutio ad integrum*, in the case of adhesions and chronic thickenings the effect is merely symptomatic, reducing sensitiveness, relieving pain, and favoring general improvement.

According to Duhrssen (*Centralblatt f. Gynakologie*) these cicatrices do not in themselves cause pain, but favor the establishment of endometritis which is relieved by the baths. To be sure, the endometritis can be ordinarily more easily cured by curetting and cauterization, hence the latter measures should be tried before a course of baths.

Permanent results are not to be expected in cases of (1) retroflexion of the uterus with adhesions, (2) fixation of one or both ovaries by peri-ophoritic bands, (3) collections of pus in tubes or ovaries, as often occurs in connection with gonorrheal infection Appropriate treatment of the third class is laparotomy with removal of the diseased organs; of the first and second, forcible separation of the uterine and ovarian adhesions, and consequent increased mobility of the organs, under anesthesia. The movable uterus is then replaced, and (according to Schulze) held by a pessary. Duhrssen, on the contrary, prefers vaginal fixation, and later massage, as advised by Chrobak. The mobility of the ovary should be maintained by massage after the method of Thure Brandt.

It is therefore essential, in order to select appropriate cases for treatment by baths, in the first place to establish a correct diagnosis.—F H. Davenport, M.D., in Boston *Medical and Surgical Journal.*

NOTES AND ITEMS

The Hotel Doctor.—The following sketch, in far greater conformity to the facts than is common in newspaper artices on medical topics, appeared in the *Sun* recently:

"Most New York hotels have a resident physician. He is known as the hotel doctor. He has nicely furnished apartments, all the latest instruments and books of his profession, and is considered an important person. The resident physician at the Aster House, the Fifth Avenue Hotel, the Gilsey, the Imperial, the Plaza, the Windsor, and other hotels of the same grade, treat the most important men in political and business life. Their patients also include some of the richest women in America, and their sons and daughters. Many of the physicians of the hotels have been men of recognized ability, yet inquiry the other day developed the interesting information that the profession at large regards them with certain peculiar notions. Furthermore, it was made clear that there is no real bond of sympathy between a hotel physican and his transient patients.

"'Professionally speaking, the life of a hotel doctor is not pleasant,' one of them said, 'Financially speaking, it has its advantages. Just how some physicians attach themselves to hotels is peculiar. The doctors who do this seem to be averse to enduring the early struggles of a young physician. We have all heard of young physicians in the county who spend their last dollar in hiring carriages in order to wheel madly through the

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town with the hope of impressing the residents with the size of their practice. There is method in such a course, and there is just as much method when a young physician in the city keeps his eyes open for a hotel berth. As soon as this is found he gets together all his spare cash and hires a room in the hotel. He then gets permission of the proprietor to hang out his shingle.

"'In many cases physicians who started in early life with a hotel berth, merely to get transient patients and avoid the dull and heart-aching waits for practice, have continued on at the hotel until they are old men. Yet there is always a pang in their hearts. They are like many old bachelors who look around them and see their friends surrounded by happy families. There is a dull longing in the hearts of these old bachelors on such occasions. Just so the hotel doctor looks on his brother physicians with steady practice in families that have learned to regard them with fondness and esteem. As these hotel doctors grow older they continue fond of their ease. They do not have to go out at all hours of the night, in all sorts of weather. Their patients are right at hand, and there is little discomfort in their lives. Yet I never saw a hotel physician who lingered on in one berth until past the meridian of life who did not regret that he had not encountered the early struggles of young physicians, with the terrible grind, the anxiety for practice, and all the disadvantages of poverty, but with the knowledge that they ars steadily climbing in their profession, and surrounding themselves with patients who become their truest friends.'

"The hotel physician paused in his story and them intimated that the great physicians of New York city were rather inclined to look down upon the men of the same profession who reside in the hotels, or at least up on those who have passed most of their days as hotel physicians.

"'These great physicians,' he continued, 'believe that we are actuated solely in our profession by money considerations. They do not believe that we have the profession at heart. They themselves believe in financial results, but the most of them aver that these are not the only considerations with them, and that they are students of every new feature in the profession for the profession's sake. They declare that we are not. If I had my life to live over again I would not be a hotel physician. I would go out and struggle, and have the regard and esteem of a class of permanent patients, and the honor that redounds to a physician in the broad field of his practice. I would advise all young physicians who begin a hotel career to continue in it only long enough to obtain money to keep them in the world until they can get a footing. We are not regarded as specialists or as great in any feature of the profession. We are simply at hand to attend to the passing ills of transient patients, who don't care a copper for us, and in whom we have only the ordinary professional interest. I can not speak too much of the tender relations that exist between the family physician and his old patients. It is one of the beautiful things in life, and one in which we hotel physicians have no part. I have attended many of the greatest statesmen and many of the most beautiful and accomplished women in the United States, but I doubt if they even remember my name, much less my appearance, and neither do I believe that they recall the help I gave them when they were in pain and distress. It is far different with the family physician. The husband and wife are grateful to him in the majority of instances until their last hours. Their children, and, in numberless instances, their grandchildren, hold fast to the old doctor, and if the doctor has a son they fasten to him, and so it goes on. There is a tie of friendship. It is similar to the confidence many families place in the old lawyer.'

"In other ways the hotel physician meets with unpleasant experiences. Many guests dislike to call in a strange physician, and do so only when their condition makes it absolutely necessary. There seems to be distrust of a strange or hotel physician, and innumerable instances were related where quests at some of the largest hotels in New York have risked death in order to get back home to their family doctor. These instances hurt the hotel doctors' pride, both as men and physicians.

"The hotel physicians of New York, though, are pleased at the more kindly spirit they observe among hotel proprietors in the event of a death in the hotel. Only a few years ago the death of a guest in a hotel was followed by summary action on the part of the proprietors. The body was hurried out of the hotel as quickly as an undertaker could be summoned. The hotel physicians say that this practice brought about many deaths, for the reason that sick people took all sorts of risks in getting to their homes, dreading to die in a hotel. Now, however, the average hotel proprietor is all kindness on occasions of death. Everything is conducted very quietly, but he assures the relatives that there is no need for unseemly hurry in removing the body. Many times the preliminary funeral services are conducted in the hotel.

"But this is a story about hotel peysicians and their chances of fame and fortune It is the advice of one of the oldest hotel physicians in New York city that young men starting in life would be far better off in the end if they took to the woods and built up a pratice, instead of becoming hotel physicians and living in comparative ease and comfort, but without any of the real blessings of the profession."—*Journal of the American Medical Association.*

A Proposed Memorial of Late M. Charcot.—The pupils and former associates of Charcot, in Paris and thoughout France are engaged in raising a fund for the erection of a bronze statue of him in the Salpetriere. This movement is now receiving cordial and material support in Germany, in England and in Italy. It has therefore seemed desirable to the neurological societies of New York and Philadelphia that the pro-

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fession in American join in this testimonial as an evidence of the emienet services of Charcot in neurology and in medicine. For this purpose the undersigned have been appointed a committee to bring the matter to the attention of the profession and to receive contributions, which will be duly acknowledged and forwarded to the central committee in Paris. It is requested that all who desire to contribute to the success of this undertaking send their subscriptions to the members of the committee nearest to them ,or directly to the treasurer, Dr. C. A. Herter, 819 Madison Avenue, New York, before the first day of February, 1895.

For New York—Drs. E. D. Fisher, E. C. Seguin, M. A. Starr, C. L. Dana and C. A. Herter.

For Philadelphia—Drs. S. Weir Mitchell, Wharton Sinkler and Charles K. Mills.

For Boston—Drs. J. J. Putnam and P. C. Knapp.

For Baltimore—Dr. William Osler.

For Chicago—Dr. Archibald Church.

For St. Louis—Drs. C. H. Hughes, F. R Fry and L. Bremer.

For Montreal, Canada—Dr. James Stewart.

For Rochester—Dr. E. B. Angell.

For Buffalo—Dr. J. W. Putnam.

For Pittsburg—Dr. Theodore Diller.

For Denver—Dr. Howell T. Pershing.

For San Francisco—Dr. J. D. Hirschfelder.

Ether and Albuminuria.—The *Nouveau Montpellier Medical*, for December 15, contains a review of an article on this subject, by Dr. Barensfeld, which was published in the *Munchener Medicinische Wochenshrift*. The writer remarks that, if etherization has still determined opponents, it is because the careful study of this method of anesthesia has often been somewhat neglected, and because, on account, of some real inconveniences of the method, too much stress has been laid on observations of little value.

Certain American surgeons have maintained that ether exercises an unfavorable action on the kidneys, but Barensfeld's researches go to show that this opinion is not very well founded. In order to determine the alleged relation of cause and effect between etherization and albuminuria, Barensfeld analyzed the urine of some persons who had been operated on, before and twenty four hours after the operation. Out of a hundred and fifty cases albumin was found after the operation in four only, in two of which the patients had shown signs of albuminuria before the operation; moreover, in these two cases the quantity of albumin had not increased under the influence of the ether. With regard to the two cases where albumin did not manifest itself until after the operation, one of the patients had been subjected to laparotomy for intestinal occlusion, after having been for three days in a condition of extreme prostration, and died on the day of the operation. The other one had been operated on for inguinal hernia by Kocher's method, and after the operation considerable albuminuria appeared and persisted, although gradually diminishing, for four days. It was, on the whole, says the writer, the only case out of the one hundred and fifty of true nephritis due to etherization.

The author reports. among others, a very interesting case of nephrectomy for left nephrydrosis in a child of three years, who had borne the ether very well. There had been no vomiting, and after the operation not even a trace of albumin had been found in the urine.—*Jour. Am. Med. Ass'n.*

A Tragedy.

The doctor sat in his study,
Pond'ring o'er his science deep,
Thinking of cases so very complex
They'd have made old Æsculapius weep,
When a genial "old jay" from the country
Dropped in with his youthful son Jim,
And remarked, in an off hand manner,
He'd "like a doctor made outen o' him."

He said Jim was inclined to be lazy,
Not at all fond of hard work;
That he couldn't be made to study,
Managed somehow his tasks all to shirk;
That he wouldn't "bug" nor dig "taters,"
Wan't no arthly use on the farm;
That his ma did't care to let him play with
the boys,
For fear he might come to some harm.

But that Jim was a fine, likely laddie,
And as docterin's such nice, clean, easy work—
Nothing 'bout it hard ner unpleasant
That Jimmie'd be likely to shirk—
That if he'd just take little sonny—
But be mighty easy with him—
He thought 'twould be but a simple task
To make a doctor outen o' Jim.

The doctor leaned back in his office chair,
Too dazed at the moment to speak,
And then remarked, in a strange, hollow voice,
That he somehow felt strangely weak.
Attempting to rise, he fell back with a groan,
Convulsively clutching his head,
Gasped once or twice—alas! this was the end,
The unfortunate man was dead.

—"J. F. C.," in *Southern Practitioner.*

WANTED.—Situation as Nurse and Traveling Companion by a gentleman of good habits, who has had several years' experience as Nurse and Masseur in "Gasconade Sanitarium," Lebanon, Mo. Best of references given. Address, NEWTON RICHEY, care of P. Paquin, M.D., Vista Block, corner Franklin and Grand, St. Louis.

THE NUMBER OF PULSATIONS can be calculated without looking at the watch. This is a real and great advantage. It means that the pulse can be taken in the dark and without the patient's knowledge. In many susceptible patients the mere fact that their physician is taking the pulse causes the rate and rhythm of the pulse to alter. With the device attached to his watch and his finger in his pocket on the keyless button, the physician can observe by eye the beat of the temporal artery, can start the chronograph hand and shut it off again at the twentieth beat, and the patient's pulse is registered. The watch can be looked at, and the pulse-rate ascertained and, if necessary, written down at the physician's convenience. The possibility of taking the pulse in the dark is also very useful. Many a time the physician must have regretted that the bringing a candle to the bedside to enable him to count the pulse-rate has disturbed the patient. We can testify to the accuracy as a pulse-recorder and as a time-keeper of the specimen submitted to us.

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Average Weekly Issue, 10,000 Average Monthly for the Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXXI ST. LOUIS, FEBRUARY 2, 1895. NO. 5.

ORIGINAL ARTICLES

The Neatest Circumcision.

BY BRANSFORD LEWIS, M.D., ST. LOUIS.,

Lecturer on Genito Urinary Surgery and Venereal Diseases, Missouri Medical College; Consulting Genito-Urinary Surgeon to the Baptist Sanitarium; Consultant in Genito-Urinary Surgery to the Missouri Pacific Hospital, the City Hospital, the Female Hospital, and to St. Mary's Infirmary, St. Louis; Member of the American Association of Genito-Urinary Surgeons; the National Association of Railway Surgeons, etc.

Read before the St. Louis Medical Society, Dec. 15, 1894.

Much ingenuity has been bestowed on the seemingly little operation of circumcision, and many different instruments and forms of instruments have been devised with a view to perfecting it in the ease and celerity of its performance and the beauty of its effect.

The older operation—that of following the removal of the tegumentary portion with a dorsal slit and then resecting the mucous portion of the foreskin—is largely in use, even at the present day, notwithstanding its many disadvantageous and ungainly features. It is slow of performance—an especially unattractive feature from the patient's standpoint. With it, the unpracticed hand is liable to take off too much or too little of the prepuce, making a result that may not be commendable from an esthetic point of view. In its execution at least three cuts are necessary, and with cocaine it is difficult to obtain effective anesthesia of so much tissue as is involved in these several cuts, rendering repeated injections of the agent necessary. The suturing, too, is awkward, to say the least, and if not done with skillful celerity, cocainization is liable to pass off before it is finished—evoking the plaints and criticisms of a nervous patient. And, finally, the suture line can not approach the mathematical precision afforded by the operation in which the sutures are placed before the cutting is done, with a fixed clamp for a support and guide.

Later operations, intending to obviate these draw backs, have been described. Skillern's and Brigg's fenestrated clamps enable the operator to do the sewing before the cutting, but, in my experience, with these alone it is next to an impossibility to obtain a sufficiently short inner (mucous) layer of foreskin. On cutting off the skin in front of the clamp, the inner layer is found to cap the glans and leave only a small preputial orifice, necessitating additional shortening of the layer, together with removal and replacing of the sutures already piercing it; or, as Dr. Briggs suggests, dividing the membrane of the dorsum between the sutures, to remedy the defect.

With the operation and instruments I wish to present, one cut completes that part of the procedure, no appended cutting being required, no reconstruction of suturing is ever necessary, and the suture-line need never be marred or serrated to give freedom to a too tight and long mucous layer of prepuce—and yet, in it, the suturing precedes the cutting, it is done with the clamp for a guide and support, conducing to ease and rapidity. Hemorrhage is practically nil, and the patient reads the newspaper throughout its performance, so complete is cocainization. And, further, because of the exactitude of the apposition and lack of interference with the wound edges, either by irregular cutting or suffusing them with cocaine solution, healing is accomplished with a promptitude that I have never seen following any of the other operations.

The procedure is carried out in the following manner: Having secured a thoroughly aseptic condition of the penis by washing, etc., its body is encircled at about its base with an ordinary small sized rubber band, for hemostasis and to prevent cocaine absorption into the system. The assistant adjusts the retractor (long arm upward), as seen in Figure I. He distends the arms sufficiently to firmly engage the serrations in the inner surface of the prepuce, and to draw on the latter, pulling on its mucous layer especially. While repressing the glans penis, the operator next applies the clamp, as in Figure II. Since no cocaine has yet been injected, only moderate traction and clamp pressure are exerted. Beginning now at the dorsal fold, a long hypodermic needle (2½ or 3 inches) is inserted between the mucous and integumentary layers of each side of the foreskin, enough of the cocaine solution (10 per cent strength) to prevent pain, being injected as it is advanced. It must be carried as far as the frenum. Abundant solution may be used, as both the clamp and the rubber bands lay between it and

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possibility of general absorption, obviating danger of poisoning.

With completion of anesthetization, the traction is to be strongly increased by the assistant, while the operator places six double-length (10-inch) catgut sutures, running them clear through the four layers of foreskin. With strong scissors the foreskin is now removed, cutting close to the clamp; this, at the same time, discontinues the use of the tractor.

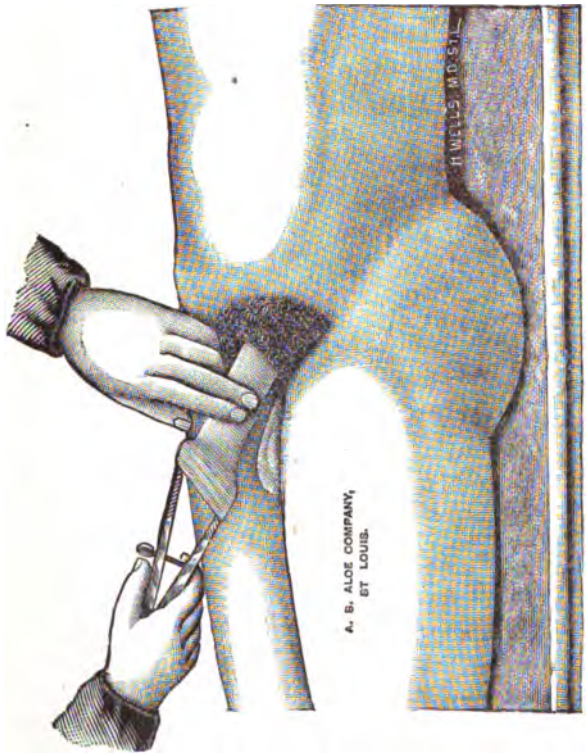
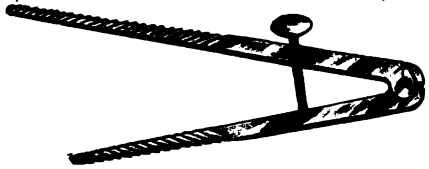


FIG. I APPLICATION OF TRACTOR.



CIRCUMCISION TRACTOR.

The assistant opens the clamp, allowing the operator to hook up and grasp with two pairs of pinceps the sutures at their middle between the apposed prepuce-layers. On cutting the threads between these two pinceps, two rows of sutures are found to be placed ready for tying. The clamp is removed, the rubber bands cut, the one or two bleeding vessels secured, and two additional sutures are placed at positions previously occupied by the tractor, viz., at the frenum and the dorsum; whereupon, with the tying of the sutures the operation is completed—usually in about sixteen minutes.

The result then presenting is the only actual and living reproduction which I have ever seen of the very symmetrical and attractive looking circumcision that unsurgical text-books are wont to picture. My dressing consists of a square of antiseptic gauze, perforated for the meatus, and powdered with borated talcum. This is lightly secured with moistened crinoline bandage, after which my dressing retainer (Fig. III) is adjusted with thepen is directed upward.

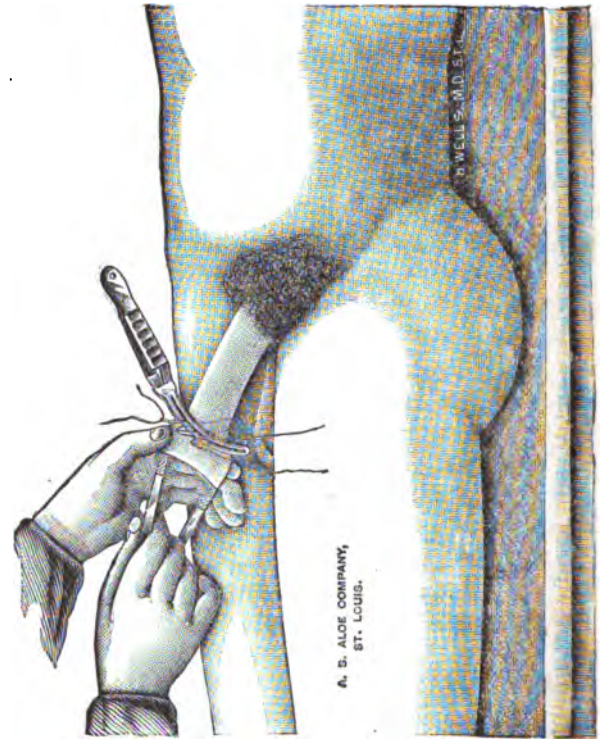


FIG. II. APPLICATION OF CLAMP, AND INSERTION OF SUTURES.

CIRCUMCISION CLAMP.

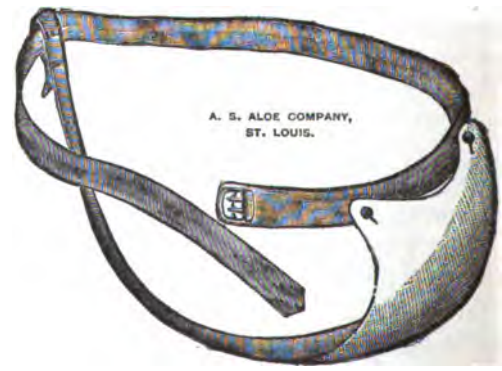


FIG. III. DRESSING-RETAINER.

The patient walks without the slightest difficulty, and is at his usual employment on the following day. Healing occurs in from four to six days. At the second dressing (two days after the operation), I often find it of advantage to dress with an antiseptic ointment in-

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stead of a dry dressing; it allows of freer movement to the penis, and allays any irritation connected with swelling of the glans, etc.

The A. S. Aloe Company, St. Louis, has succeeded admirably in constructing the instruments herewith presented. The curvature of the clamp affords increased room for the glans penis, which, in its adjustment, is squeezed down as flat as possible.

The one precaution that I would impress on the beginner with this operation, is to see that his assistant makes strong traction with the tractor at the time of introducing the sutures, bearing in mind that too much cannot easily be exerted, and that the danger of a fault lies in the direction of getting a too long mucous layer to the future prepuce. If this precaution is observed, the result will be exactly correct.

1006 Olive Street.

Matters and Things Medical in General.—A Brief Retrospect of Half a Century.

BY W. M. M'PHEETERS, M.D, ST. LOUIS.

Read before the St. Louis Medical Society, December 15, 1894.

From the above title, it will be seen that I have given myself ample scope to say whatever occurs to me, without reference to logical sequence. Not, however, "Like Orient pearls at random strung;" but rather, "the random strung, minus the orient pearl."

I do not agree with the late Dr. Oliver Wendell Holmes, in his famous declaration, "If all the medicines in the world were cast into the sea, it would be all the better for mankind, and all the worse for the fishes." But, if instead of all, he had said nine-tenths of all the medicine in the world, I would be disposed to say amen. We have too many medicines and far too much of it is daily prescribed, and daily swallowed without being prescribed, for the good of those who swallow it. But the fact is, the vast majority of mankind, and especially of womankind, are firm believers in the efficacy of medicine, and hence they like to be dosed. If the doctor refuses to give it to them they will take it in spite of him. It is not at all to be wondered at, therefore, that there should be a disposition on the part of the profession to gratify them in this regard. But I venture the assertion, that the older the physician grows, and the wider the range of his experience becomes, the less medicine he will give, and the more reliance he will be disposed to place in the *vis medicatrix naturæ*. The young doctor is the special patron of the apothecary and the hope of the drug manufacturer.

Dr. Holmes, to whom allusion has been made—whose recent death saddened men of letters of more than one continent, and who so admirably united in his own person the poet, the philosopher and the physician—with all his accomplishments, was very much of an agnostic in medicine; but his leaning in that direction tended more to rational conservatism than to the belittling of his own profession. Indeed, I am persuaded that a moderate amount of scepticism in medicine is highly desirable—enough at least to insure reflection, and to prevent the too ready adoption of new and untried theories. Credulity in medicine, not less than in religion, is the fruitful source of error—all the miserable brood of isms and pathys which have disgraced the profession and cursed the world, are its legitimate offspring. We should learn to avoid the two extremes, blind credulity, which believes everything, and stolid agnosticism, which believe nothing, and adopt the true philosophy, "prove all things, and hold fast that which is good."

I have recently celebrated the 53rd anniversary of my arrival in St. Louis, then a flourishing town of 20,000 inhabitants, and already beginning to attract national attention. Since then, busy time has brought many and important changes. Indeed, I may say that nothing now remains just as I then saw it, even the Mississippi river has undergone vast changes in its relative importance. Then it was the highway of travel and the sole channel of commerce, now it is of but secondary importance in these regards, having given place, in large part, to more rapid transit by rail. The old Planters, House, just then completed, having served its day and generation, has given place to a new and more magnificent structure. But these physical changes—great as they are—are so obvious that they need not be enumerated; I will therefore restrict myself to matters and things medical.

Of all those whom I found practicing medicine here on my arrival, but a solitary one now remains; the others have all passed into the other world. Of the one remaining—then, as now, he was a fine specimen of the genus homo, as well as the genus medico. Of course, I allude to Dr. J. B. Johnston, who preceded me but a few months, but whom I found always actively engaged in laying the foundation of his subsequent deserved success. A few months later brought, first Dr. Moses, and then Dr. Pope, both of whom became prominent, one as a practitioner of medicine, the other as a surgeon of national renown. The former still lives in dignified retirement, the other came to a tragic death in a foreign city, beloved and regretted by all.

In the fall of 1841, I found the St. Louis Medical Society in full and vigorous operation, having been chartered by the Legislature in 1837, holding meetings monthly from May to November and semi monthly the rest of the year. In 1842 it contained a membership of about 50. The meetings were proportionally as well attended then as they are now, while the papers read and the discussions had were of no inferior character. There was also manifested a commendable *esprit du corps* and a strict adherence to professional etiquette. Indeed, St. Louis, at that time, contained physicians of recognized ability and ruputation. Dr. Englemann, distinguished as a botanist and general scientist; Dr. Wislize-

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nus, for his careful and accurate meteorological observations, and Dr. Beaumont, renowned for his physiological researches and his experiments on digestion, afforded by the rare opportunity he had of looking into the interior of the stomach of Alexander St. Martin, and noting its normal workings. Besides these, there were a number of other intelligent, educated physicians, such as Drs. Lane, McCabe, Moore, Reyburn, Sykes, Adreon, Prather, Meredith Martin and others. These men were all skillful and successful practitioners, and let me say, that the pneumonia they had to treat yielded as readily to the lancet, and the rheumatisms they encountered to the colchicum and nitrate of potash treatment, as do the same diseases now to modern antipyretics. I mention these facts that the younger members of the profession may know what kind of men their predecessors were—that they were abreast of the times in which they lived.

Specialism, as it exists at the present day, with its advantages and evils (greatly beneficial when kept within certain bounds, otherwise not), was not in vogue at that time. The nearest approach that came to it was in the case of a certain Kentuckian, who undertook somewhat of a monopoly in this line. One morning he hoisted his sign, which read, "Dr. Price, Physician, Surgeon, Aurist, Oculist and Accoucher," but he soon broke down under the weight of his undertaking and left for parts unknown.

In November, 1840, prior to my arrival, the celebrated Dr. Joseph N. McDowell, assisted by his friend and colleague, Dr. John S. Moore, established the first Medical College west of the Mississippi river, as the Medical Department of Kemper College, but popularly known as the McDowell College, which started out with 37 matriculants. Fresh from the University of Pennsylvania and the wards of the Blockley Hospital, Philadelphia, I had the pleasure of occasionally listening to the second course of lectures in this pioneer institution. This was the day of small beginnings in the way of medical teaching in St. Louis; but as "tall oaks from little acorns grow," so this parent college, after undergoing various evolutions and changes, both in name and organization, stands to-day as one of the leading medical institutions in the West, the Missouri Medical College. All honor to its original founder, as well as to those who have so ably and successfully broadened and deepened the foundation which he laid. Two years later, the eminent surgeon, Dr. Charles A. Pope, assisted by Dr. Litton and others, established a second medical college, as the medical college of the St. Louis University, which in its turn has undergone like changes, and is now known and honored as the St. Louis Medical College, or the Medical Department of the Washington University. To it belongs the credit of having been the first western medical college to adopt the three years graded course of study, a distinction of which it may well be proud.

At the risk of antagonizing some whose friendship I value and whose motives I respect, I venture the opinion that it would have been well for the profession, and for the cause of medical education, if the establishment of medical colleges had ceased with the two already mentioned; for, however, it may be to the interest of those whose ambition it is to become professors, I fail to see how the profession at large is benefited, or the cause of medical education is advanced by the multiplication of medical school—higher medical education, I mean, not the mere granting of degrees.

The St. Louis Mullanphy Hospital of the Sisters of Charity was the only hospital here when I arrived. This institution was founded in 1828, and the original building erected on a lot, situated on the corner of 4th and Spruce streets, donated by John Mullanphy. In it the city's sick were cared for, attended by a physician appointed by the city, and paid for per capita. The City Hospital was not completed for occupation until 1846, when a building, 111 feet long and 50 feet wide, was erected on the present site at a cost of $17,000, and with a capacity for accomodating 90 patients. Drs. John S. Moore and M. M. Pallen, health officers, appointed by Mayor Bernard G. Pratt, were charged with the duty of removing the city's sick from the St. Louis Hospital, and of inaugurating the new institution. Dr. David O. Glascock was appointed first Resident Physician, at a salary of $200 a year, including board and lodging. The original building was almost completely destroyed by fire in 1856. All the sick were safely removed, save one, an insane Italian who rushed back into the flames after having been taken out. In 1857, the hospital, greatly enlarged, was rebuilt at a cost of $62,000, constituting the front portion of the present building.

As early as 1842, for the double purpose of aiding the sick and benefiting its founders, Drs. Moses, Pope, J. B. Johnston, George Johnson, J. Clark and the writer, associated themselves together and established the first public dispensary. At first this institution, which was well patronized from the start, was sustained by private contributions, mainly through the kindly efforts of Madame Gausche, but subsequently obtained a small annual appropriation from the city, and was kept up for a number of years, and until the work of gratuitous attendance upon the poor, by means of free public dispensaries, was taken up by the medical colleges and other interested parties. It is worthy of remark, that although 52 years have elapsed, three out of the six physicians associated in this dispensary still survive.

As yet, St. Louis had no medical journal; but this want, if want it was, was supplied by Dr. Linton, who, in April, 1843, started the *St. Louis Medical and Surgical Journal*, a monthly publication and the first of its kind west of the Mississippi; with which, before the termination of the second year, I became connected as associate and managing editor, and so continued until its suspension on account of the war, in 1862. And here let me say of Dr. Linton, that, both by his writing and by his teaching, he has impressed his genius upon the profession of this city and surrounding country, as no

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other man has done. He was both a logician and a medical philosopher.

About this time the profession was strengthened by the advent of Dr. M. M Paller, who soon became popular, both as a practitioner and as a teacher; and later on, in 1845, by that of Dr. S. Pollak, who still remains, a bright connecting link between the profession past and present. Of him I will say, as he is not present, that this Society never had a more faithful, useful or honored member than he.

The year 1849 is memorable in the history of St. Louis and in the annals of the medical profession; first, because of the great fire which occurred in May, and which destroyed so large a part of the business portion of the city, but chiefly on account of the terrible epidemic of cholera which prevailed throughout the whole of that year, but with peculiar severity from May to August. Few modern communities have been so severely scourged as was this devoted city during that memorable period. With an estimated population of 70,000, at least one-fourth of whom took refuge in flight at the approach of the disease, the mortality for the year was 8,108, mainly from cholera. During the months of June and July alone, there were 5,108 deaths. It was like going into a continuous battle for sixty days, and coming out each day with a loss of nearly 100 killed. As is always the case, the medical profession stood manfully to their post during all these dark days, encountering the dangers of contagion and risking their own lives in their efforts to save others. Nor was this done without severe loss on their part, and the sacrifice of many valuable lives. Had these devoted physicians fallen in battle amid the clash of contending armies, they would have been esteemed heroes—their valor would have been heralded to the world, and they would have been accorded military honors at their burial. And yet, these brave doctors were as really and truly heroes and as much entitled to fame as the proudest warrior that ever fell on the battlefield. Such, however, is the estimate the world places on bravery when exhibited under different, but no less trying circumstances.

During the year of the cholera, as well as the decade immediately preceding its, St. Louis acquired the reputation for general unhealthiness and excessive bills of mortality—especially infantile mortality—which it has not yet outlived and which still clings to it. It cannot be denied, that at that time there was some ground for this unenviable notoriety. Then the sanitary condition of the city was anything but good. We had no underground sewers, only surface drainage. The growth of the city was so rapid that the streets were only partially and imperfectly paved, the alleys were filthy, and in and around the city were numerous sink holes, or small pools filled with stagnant water. Besides, at that period, St. Louis was made the objective point where hundreds and thousands of all conditioned European emigrants gathered to be distributed throughout the entire Mississippi valley. Some idea as to the extent to which this cause operated may be had, when it is stated that on June 28, 1849, 350 foreigners were landed on the wharf from a single steamboat, "The New Uncle Sam," nor was this an unusual occurrence. These unfortunate emigrants, recently off ship board, debilitated by the long sea voyage and in the worst possible sanitary condition, arrived during the pestilence of a fierce epidemic, and finding fresh meat and green vegetables—to which they were unaccustomed—abundant and cheap, they indulged to their hearts' content, and in too many instances paid the penalty with their lives. Is it any wonder that under such circumstances our bills of mortality should have been so excessive? But, fortunately, all these causes have long since ceased to operate, and to-day St. Louis claims, and justly claims, to be one of the healthiest cities in the land, and it is high time that this claim is generally recognized.

In the springs of 1848–'49 respectively, there graduated two young physicians. The one in the Missouri, and the other in the St. Louis Medical College; one hailing from Illinois, the other from Missouri, but both locating in this city. They soon became prominent, first as anatomists, and then as surgeons. Both filled, with marked ability, prominent professorial chairs. Both presided over this Society. Both were honored by being elected President of the National Medical Association, and both were rewarded by large and lucrative practices. Here, however, the analogy ceases. One was suddenly cut off in the midst of his usefulness—at the very noon tide of his success—profoundly regretted by all. The other still lives, the honored professor of surgery in the St. Louis Medical College. You all know to whom allusion is made—Drs. Hodgen and Gregory. Toward the close of the forties, there also graduated from the medical colleges of this city a number of young men, all of whom have become prominent, all of whom have been honored by this Society and all of whom still continue to adorn the profession. Among these may be mentioned, Drs. Alleyne, Maughs, Atwood, Elsworth Smith and Papin.

As a matter of some interest I wish to place on record a brief history of the formation of the Missouri State Medical Association. In 1850, I attended the American Medical Association, held in Cincinnati. At that meeting, although so near, Missouri was poorly represented; not a delegate, as I remember, outside of St. Louis, and but few from the City. Then we had no State organization, and few, if any, medical societies, save one in this city. The poor showing which Missouri made in comparison with other western states was a source of mortification to those of us who were present. On returning from the meeting, and in order to wipe out this reproach, I introduced into this Society the following preamble and resolution, which was unanimously adopted.

"WHEREAS, In the opinion of this Society, the time has arrived when it is both expedient and desirable to unite the medical profession of the State of Missouri, for the purpose of mutual protection and improvement, be it therefore

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Resolved, That a committee be appointed to address the regular members of the medical profession throughout the State, inviting them to meet in general convention, in the City of St. Louis, on Monday, the fourth day of November next, for the purpose of forming a State medical association, with auxiliary societies in each town and county in the State."

In accordance with this resolution, a committee, consisting of Drs. W. W. McPheeters, John B. Johnston, S. Gratz Moses, George Englemann and George Penn, prepared a circular, and sent it to every member of the regular profession in the State whose address could be obtained, inviting and urging them to be present at the proposed convention. The result was, that on November 4, 1850, a large number of physicians, from all parts of the State, assembled in this city, and, after due deliberation, formed a State Association, adopted a constitution and by-laws, elected officers and urged the formation of auxiliary societies throughout the State Dr. Thomas, of Booneville, was first President, and Dr. Alleyne, of this city, Secretary. This Association continued to meet annually, and did efficient work, as will be seen from its published transactions, until the breaking out of the civil war in 1851, when it was temporarily suspended, as, indeed was everything else civil, until the close of the war in 1865, when it was reorganized into the present State Medical Society.

Prior to 1857, the office of Coroner of this city was filled by a non medical man. At a political convention held that year, I had the pleasure of placing in nomination, as the first medical coroner, our venerable and honored ex-president, Dr. L. Charles Boisliniere, who was triumphantly elected by the people the following November. Since this time this important office has been accorded to the medical profession, to whom it rightfully belongs.

But enough of what you may regard as ancient history. No attempt has been made to give a *complete* record of medical events, or of medical men, during the past half century. Had this been my design, there are many worthy names omitted, which would certainly have been entitled to honorable mention. Nor has it come within the scope of this paper even so much as to allude to the many distinguished physicians who have come into deserved prominence in later years, as I have confined myself strictly to ante-bellum times.

The past is certainly not without its lessons of instruction; but when we compare the present state of medical knowledge with what it was fifty years ago, the change is found to be *wonderful*, along certain lines *marvelous*. With these changes you are all familiar. I will, therefore, not weary you with their recital. But think, for a moment, of the heaven-born immunity from pain afforded by anesthesia; the certainty in diagnosis and prognosis brought about by the microscope and by physiological chemistry; the inestimable blessing confirmed on general surgery and on obstetrics by antiseptics, which, by simply excluding dirt and insisting on absolute cleanliness, has shut off the cause of inflammation and almost completely removed the danger of pyemia and septicemia. Consider the revolution—or rather the new creation—wrought in gynecology, as the result of American genius, and the revelations made by abdominal surgery. Fifty years ago it was considered almost certain death to cut into the abdominal cavity; now the danger has been so minimized, that it has become an operation of daily occurrence and of comparative safety. My attention was recently directed to this subject by reading the report of a case published in the *Boston Medical and Surgical Journal* for 1845, just fifty years ago. During that year the Hon. Hugh S. Lagare, of South Carolina, then Attorney-General of the United States, while on a visit to Boston, was taken with symptoms of bowel obstruction, for which he was attended by two of Boston's most distinguished surgeons. The difficulty was readily recognized and all the known medical remedies were applied, but to no avail. Death followed, and on post-mortem examination the colon was found to be doubly twisted, with mesentery as an axis. An operation seems never to have been thought of; indeed, Dr. Bigelow, in commenting on the case, says, "Intestinal strangulation, we have reason to believe, is a fatal disease, except in rare instances in which spontaneous restoration of the parts may, under favorable circumstances, take place." The resources of art, he says, are unavailing, unless by resort to a dangerous and unjustifiable operation. And four years later, in 1847, Velpeau pronounced ovariotomy to be a cruel and barbarous operation. And yet, who does not know that the valuable life of this distinguished statesman might, in all human probability, have been saved by a simple laparotomy. But, sad to relate, this comparative immunity which has been so frequently demonstrated has been made the occasion for the unnecessary and reckless cutting into the abdominal cavity, as though the danger, instead of being so greatly diminished, was wholly removed. To such a disastrous extent has this abuse been carried, that conservative surgery has been compelled to assert itself sharply. Without pursuing this subject further, but in view of all that has been accomplished in the recent past, who will undertake to limit the possibilities of the future, or say what seeming impossibilities may not yet be accomplished.

Lest, however, in our "self congratulation," we should be exalted above measure, we have only to consider what yet remains to be done; for, notwithstanding the discovery of the bacillus tuberculosis, and the high hopes excited by "tuberculin," consumption still continues to be a reproach to the profession, and where once thoroughly established is as little amenable to treatment, and as certainly fatal now as it ever has been. Scarlet fever and diphtheria will invade the nursery and rob our households of the brightest and most cherished jewels. (What is to be the outcome of the "anti-diphtheritic seropathy" yet remains to be seen. Let us hope and pray, however, that it may prove as efficacious in mitigating the virulence of diphtheria as was vaccination in the case of small-pox). We have

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no sure cure for rheumatism, no successful treatment for typhoid fever, nor for Bright's disease, nor for a score of other diseases not necessary to mention. It is obvious, therefore, that whilst progress has been steady and rapid, the goal of professional desire has not yet been reached, and that there are still in reserve for the future scientific discoverer laurels as bright and as fadeless as those which adorn the brow of a Lister, a Koch or a Sims.

I have alluded to the personnel of the profession of fifty years ago; let me, in conclusion, say a word of the profession of to-day, and make mention of the fact that St. Louis has a doctorate of which any city might justly be proud; especially is this true of its junior members, and surely there never was so auspicious a time for entering the ranks of medicine as now. The young man is to be congratulated who comes in at this golden juncture, provided he is prepared, by a thorough preliminary and professional training, to make the most of his opportunities. In him there is a future bright and alluring; whilst he who is lacking in these essential pre-requisites is only to be pitied.

Be assured, gentlemen, the cause of medical education in this country will continue to advance, until the present three years' course of study will have given place to one of at least five years' duration, with corresponding educational requirement.

Hydrochloric Acid in Diphtheria.

BY T. C. WITHERSPOON, M.D.

Read before the St. Louis Medical Society, December 22, 1894.

This paper is to be purely clinical and I shall use this opportunity to introduce to your attention, not any mysterious drugs whose chemical nature or whose manner of combination have been discovered only by myself, but I intend giving a few statistics obtained while using HCL, that old-fashioned remedy, in my diphtheria cases during the last year and three-quarters. In this day of activity and push, men are too prone to prostitute professional scientific attainment for the dollar, and by means of such degradation gain in pocket that which they lose in respect.

Diphtheria is eminently a local infection, producing systemic poisoning by the absorption of the leucomaines or toxines generized at the seat of difficulty. In its treatment we have to contend in the early stage almost solely with this local condition. Later we have systemic difficulties to relieve, or that local condition engendered by the toxines in some distant organ or organs not directly exposed to the infectious agent. In this paper, I shall speak more particularly of the local care of the throat in diphtheria, and mention the general or systemic treatment necessary but cursorily.

A true diphtheria is due, beyond doubt, to the inroads of the Klebs-Loeffler bacillus and in the large majority of cases it demonstrates its presence to the clinician, either by a fibrinous exudate replacing more or less the epithelial structure of the part, or it consists of a necrotic sub-epithelial structure as well as a more superficial fibrous one. Diphtheria cannot be diagnosticated with certainty, except when suspected because of previous contact with a typically true diphtheria, and then only when culture inoculation has proved its identity.

Called to see a case early in its start, or even later, our attention is turned to the local condition that exists, and we vigorously combat its progress into further parts. Two factors are now to be considered: first, the removal of the membrane, which is directly opposed to antiseptic conditions of the throat; and second, having removed it, to maintain as surgically clean a throat as possible. To the end that I might accomplish the first requisite, I have used papoid, pepsin, trypsin and the various fermenting agents of hydration and solution of proteid materials, but I believe with uniform failure. Likewise, I do not think it a good plan to remove the membrane directly by a swab, whether plain or saturated with an antiseptic, as it most frequently leaves an open bleeding surface upon which we find an increased exudate and a deeper slough in a short while. It is here that I have derived most benefit from the application of the dilute hydrochloric acid, one part of the dilute acid in two of water. If the acid is more concentrated it will cause a decided tendency to glottic obstruction as well as increased edema. In children under one year of age it is well to use the dilute acid in the proportion of one to four. Fibrin itself is very hard to dissolve, it being soluble only in concentrated acids and alkalies. In dilute acid it is only sparingly soluble and that after long contact. The fibrinous layers, however, rest upon the gelatin bearing sub-epithelial structure, or a closely allied reticular structure, one which is more readily changed into soluble syntonin by the action of a dilute acid. Wherever a diphtheritic membrane is found, it can be determined that the fibrin factors have given rise, not only to a superficial product, but have deposited their meshwork between and under the epithelial cells and incorporated them in the whole. Thus leaves a basement structure denuded and often much necrosed, being killed and throttled by the interstitial fibrin formation and toxic attack. After the use of the acid for from twenty-four to forty-eight hours, as a rule twenty-four hours, you will readily detect a loosening up of the edges of the grayish white membrane here and there, or actually find it hanging from but a flimsy and meager hold near the center of the pseudo membrane. Following this the throat is soon entirely rid of this offending material. I can recall but few cases in which forty-eight hours was not sufficient to rid the throat of this material, thus accomplishing the first desideratum in the treatment of the affection, ridding the patient of an active nidus for the growth of the specific organism. This result is obtained, not only in a false, but a true diphtheria, as it has for its basis physiological principles only. In my first use of the acid I gave it internally altogether, by which means it was thoroughly applied

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to the throat in the process of swallowing; but later I began the use of the swab, believing it possible to keep the throat more constantly acid thereby. I might say in this connection, that through conversation I have been led to the belief that the acid condition of the throat directly inhibits the growth of the specific organism.

The second point is to keep the part clean, having gotten rid of the strong hold of bacterial growth on the membrane. Various antiseptics are proposed and used, but I prefer the bichloride of mercury in proper strength, of course, taking the age of the child and the mode of application into consideration. In those old enough to gargle, a solution one to one thousand, to which five parts of tartaric or citric acid are added, may be used every hour, alternating with the hydrochloric acid applications at half-hour intervals. This will suffice to keep the throat and mouth in a fairly good state so far as the specific infection is concerned. Those too young to gargle can take the bichloride internally, being able to take proportionately very large doses as compared with the adult. The spray may be used if preference is given to that mode of application. The efficacy of bi chloride of mercury locally was shown by Drs. Park and Beebe, of New York City, only recently in the *Journal of Laryngology*. They find that tube inoculations taken from the throat closely following the use of bichloride spray or gargle gave negative results, but that the same individual gave active cultures an hour or so later. It is also curious to note that the other organisms were not so readily inhibited, but yielded active cultures fol lowing a bichloride application to the part. This fact should be remembered when treating the throat after mixed infection has set markedly on foot. Mercury has been recommended by a multitude of writers in the in hibition of the local and general symptoms, and given not only in the form of an antiseptic, or even through the mouth, but introduced by other routes. These means accomplish locally, I believe, all that is possible.

As to general medication, one is governed by the conditions presented, and appropriately looks after paraly sis, nephritis, bronchitis, etc., as the case may be. I have found that a fair-sized dose of the salicylate of sodium, given three or four times a day to those exposed, often prevents or markedly modifies an attack. My last forty cases I have treated after this fashion, with but four deaths. Two of these occurred in chil dren whom I was sent to see with the idea of performing tracheotomy. This I was not allowed to do on ac count of prejudice on the part of the parents against the knife, and I resorted as a last means to rid the larynx of its offending membrane by local applications. Of the other two cases one died of membranous bronchitis, and the other of paralysis just as the case was progressing nicely to a successful issue. We are too prone, however, to eliminate our bad cases from our records to make a nicer appearing per cent of recoveries, and I have therefore here taken into account every case, however late or hopeless it was when I was called in. There is a possibility, in considering that number of cases, that a mistaken diagnosis might have been made in some. Of five thousand six hundred and eleven cases examined by Dr Park and Mr. Beebe, only five per cent proved to be true diphtheria. Those that were false cases, however, gave a record of non-transmissibility to those exposed. Of 113 cases of false diphtheria, only 14 cases occurred at the same time in other members of the family, and in that number without evidence of transmission, but rather because of some unhygienic condition to which all were exposed at the same time. To this point I wish to call attention as it is a governing factor in estimating the correctness of diagnosis, namely, a lack of transmissibility if a specific contageon. In but one family I could not trace the occurrence of exposure to a case of diphtheria, and in this there was but one patient. In the others I found a history of exposure, as I found a succession of cases in a family which strongly pointed to a contagious element. In five families, aggregating twelve cases, I found that the trouble followed upon exposure to neighbors' children who had diphtheria. In the four families to whom these children had been exposed we have an aggregate of eleven cases. These eleven cases giving rise to twelve similar cases in other families upon exposure, point, more or less positively, to the specificity of the trouble. In the remaining cases I find a decidedly con tagious tendency in that in none did the trouble start simultaneously in two members of the family, but showed itself in from two to twenty days after the first outbreak. I have not considered membranous croup in this list, unless occurring in the house of a diphtheritic case, or giving a history of contagious transmission to others, exposed. The same record above referred to has shown that of 286 cases of membranous croup examined bacteriologically, 224 contained the true diphtheria bacillus. Hydrochloric acid will not answer so well in this condition, because of the impossibility of keeping the larynx effectually acid.

In conclusion, I will state that in not a single case did I have a death where I had been sent for as soon as the child showed symptoms of being sick, and in whom the membrane had evidently not existed for several days or longer. Doing surgical work, I do not want any more cases of this trouble to treat, but I believe it is of sufficient importance to demand of us the recording of any procedure which has given relatively good results in the past.

The "Weekly Medical Review" Pocket Reference Book and Visiting List; Perpetual 1895, (J. H. Chambers & Co, Publishers), is made for twenty-five patients per week, a size that seems settled upon as being as large as physicians are willing to carry, those having a larger list of patients preferring to use more than one list. It has the usual ready references and some memoranda that are as new as useful, such as articles loaned. It will hold its place in the lists with the best.—*American Practitioner and News.*

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EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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Teetotalism and Moderate Indulgence.

Whilst up to a recent date only laymen, religious sects and some of the clergy, were indiscriminately condemning even the moderate use of all alcoholic beverages, there have lately been not a few voices from the ranks of the best medical authorities, who have drawn attention to the injurious influence of even the so called moderate indulgence in such beverages; with this difference, however, that the latter individualize and approach the subject in a more logical, objective and scientific manner. The tendency of the teetotalers to indiscriminately and fanatically oppose the indulgence in even moderate quantities of any alcoholic stimulant was no doubt the consequence of dearly bought experience. They no longer proposed to put up with a habit which was rapidly undermining the character and morals of those dear to them. How often do we meet with the remark of well meaning people, "Alcohol has been the ruin of so many even exemplary young men that no drop of anything containing it shall be served in our house." Doctors, from time immemorial, have preached the maxim: moderation in everything, although in their ranks not a few may be found that have indiscriminately sung the praise of the beneficial effects of alcohol and others who have condemned it altogether.

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There is a marked tendency at present among medical authorities to analyze the use and abuse of alcohol; to determine when its indulgence in moderate quantities is admissible and when it must be absolutely avoided. It is certain that alcohol is above all contraindicated in persons afflicted with an unstability of the nervous system, in psychopathic and neuropathic individuals. Such persons would better never touch, even the weakest alcoholic beverage. It may be admitted that a healthy person, when he is in a state of fatigue either from physical or mental work, worry, or any nervous strain whatever, will be benefited by a moderate amount of an alcoholic stimulant, but this stimulation becomes dangerous in persons with psychopathic and neuropathic tendencies. The only haven of safety for these unfortunates whose number is steadily increasing, keeping pace with advancing civilization, is to be looked for in total abstinence. There is a tendency in individuals of this class to indulge in larger and larger quantities of the stimulant, until eventually they are slaves to a habit, which is bound to end in their moral, mental and physical ruin, unless it can be overcome by willpower and determination combined, if possible, with medical supervision.

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Struempell has drawn attention to the fact that the innocuousness of so-called moderate quantities of beer is a mistaken idea and has shown by statistics, gathered in Germany, that a daily quantity of beer, exceeding on an average a pint and a half a day, will cause degenerative changes in the specific parenchyma of the kidneys and, eventually, Bright's disease.

Statistics gathered in Great Britain, on the other hand, which have made the rounds of nearly all the medical journals of the word, seem to prove, that moderate drinkers have the best chance for longevity. This fact appears paradoxical at first sight when compared with the results of Struempell's statistics, but only apparently so; for it must be borne in mind, as has very pertinently been claimed, that among the total abstainers there are many persons, who, in consequence of an undermined health, former excessive indulgence in alcohol etc., have become teetotalers. In fact, there are many persons who assert that, among laymen, nearly all the most ardent advocates of total abstinence, not including the better sex, have been guilty of overindulgence; this of course, coincides with human nature in general.

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The means of exterminating excessive alcoholic indulgence can probably never be attained by legislation, and only partly so by religion or philosophy. The best means to attain this end appears to us to be a broad and liberal education, which would teach the individual logical reasoning. People should be more generally made acquainted with the fact, that what may be beneficial to one, is poison to another, and that because one person may indulge in a habit without apparent detrimental effect, it may be entirely different with others; in other words, that it is necessary in every-

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thing to individualize. While one person may smoke a dozen cigars a day without any apparent deleterious results, another's health may suffer from the allowance of half a cigar a day, or even less. It is similar with other stimulants, alcohol included.

That medical authorities are not by any means unanimous, although many incline toward teetotalism, is illustrated by the position taken by the *Calcutta Medical Reporter*, who, in referring to an editorial in the *Civil and Military Gazette*, in which teetotalism in the Indian army is accused of being responsible, in some degree, for the great prevalance of typhoid fever, says:

"We think the subject is worthy of investigation and would commend it to the notice of our medical authorities. The cemeteries of India are full of two classes of men, those who drink too much and those who drink nothing at all."

***

A very plain and practical example of the deleterious effect of alcohol upon an unstable nervous system, has been furnished by an insane asylum of Zurich, where wine, beer and cider used to be served on particular festivities. Ever since these beverages have been replaced by lemonade, the condition of the patients has been changed from a turbulent noisyness to a comparative calmness, and to such an extent that many of the waiters, who are allowed a moderate quan tity of alcoholic drinks, having observed the beneficial effect of the entire withdrawal of alcohol upon those entrusted to their care, now abstain from their allowance of wine, beer, etc., and draw instead an equivalent amount of money, to which they are entitled by usage.

It is in consequence of similar experiences, that the insane asylums of London and Heidelberg no longer furnish alcohol in any form to their patients. Alcohol does not only cause and keep up many psychoses and neuroses, but its withdrawal often produces most surprising curative effects. Sexual perversions are not only caused and aggravated by the use of alcohol, but also cured after its withdrawal.

The moral to be drawn from these observations, is that psychopathic, resp. neuropathic individuals should be total abstainers.

Lumbar Puncture for the Removal of Cerebro-Spinal Fluid.

This was the title of a paper by Dr. William Browning, of Brooklyn, read at a meeting of the American Neurological Association. He reviewed the main points in this recently devised operation. Brief notes of a few cases were given, as well as directions for its performance. The following conclusions were reached:

1. The method was simple, easily practiced, and rather attractive.

2. In itself it was usually without danger.

3. By it we certainly could draw off cerebro-spinal fluid.

4. The quantity removed at short sittings had been from one ounce to one and a half in adults.

5. This without doubt represented the amount of free fluid usually present in the lower vertebral canal even when occluded above.

6. In internal hydrocephalus the relief, if any, was but very temporary. In the common form due to tubercular meningitis the result was not worth the trouble, while in the closed or sacculated forms it must rather do harm than good.

7. As a diagnostic means—*e. g*, in suspected meningeal hemorrhage—it was valuable. As an index of pressure it might also be worth noting.

8. It was worth further trial—(*a*) as a passing relief in brain tumors not complicated by hydrocephalus; (*b*) as a substitute for trephining in progressive dementia; (*c*) in certain spinal troubles; (*d*) and possibly as a means of applying medication directly to the spinal meninges.

9. In conclusion it might be said that, while admissible in all cases of brain pressure, there is as yet no established indication for this procedure except for diagnostic purposes.

A Year's Immigration.—The annual report of Herman Stump, United States Superintendent of Immigration, shows that during the fiscal year ended June 30, 1894, 288,020 immigrants arrived in this country, of whom 285,631 were landed and 2,389 debarred from landing because of being under contract to perform labor made previous to their arrival. Of the immigrants landed, 96,000 were destined for New York State, 32,000 for Pennsylvania, 25,000 for Massachusetts, and 22,000 for Illinois, the others being scattered throughout the United States, no other State receiving a greater number than 10,000. Immigrants destined for Southern States, all told, did not exceed 12,000. Of the immigrants over sixten years of age, 41,000 could not read or write.—*Ex.*

The Second and Enlarged Edition of "A Treatise on Ophthalmology for the General Practitioner," by Adolph Alt, M.D., Cloth, 8vo., 315 pages, price $3.50, published by J. H. Chambers & Co., St. Louis, Mo., is a concise and accurate citation of the facts pertaining to ophthalmological science as they appear to-day, and in such form as to be useful and accessible not only to the specialist but to the practitioner of general medicine and the student. The chapters on anatomy and physiology are especially good. The different pathological states to which the human eye and its appendages are liable, are taken up and exploited in a most thorough way. The various operations are delineated in a manner that can not fail to be understood. Altogether this is a readable volume, one that doubtless will secure able support from the profession.—"D. M. C." in *Medical Age*.

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MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening Dec. 15, 1894, the Vice-President, HEINE MARKS, M.D., in the chair.

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DR. C. C. MORRIS presented a specimen of "Exsected Bowel," obtained by operation on a woman for strangulated labial hernia.

The hernia had existed for four or five years, and for three years there had been a distinct swelling in the left labium. Strangulation had been partial for some time, but became complete a short time before operation. When the sac was opened about two ounces of a very offensive fluid mixed with fecal matter escaped. The bowel was found necrosed, and about two and one half inches was excised. The continuity was re-established by an end to end anastomosis, the mucous membrane being turned in and two rows of Lembert's sutures applied.

Patient is doing well, her temperature this evening being 100.8°, and there being no pain.

***

DR. BRANSFORD LEWIS read a paper (see page 81) entitled,

THE NEATEST CIRCUMCISION.

DR. PERKINS thought that the operation might be performed in the manner described where we have simply an elongated prepuce, uncomplicated by edema or venereal sores. When these latter conditions exist the instruments could not be used very well. The sewing should be done very carefully, six or eight stitches, as suggested, being hardly sufficient to establish good coaptation. Speaker usually begins at the frenum, and by a rapid continuous suture sews around the penis and then back again to the frenum, when the two ends are tied. Only a very small margin of skin and mucous membrane is included in the stitches, and the thread may be readily removed afterward. Hemorrhage requires no further attention, as it may very readily be controlled by pressure applied with the dressing.

DR. JACOBSON preferred catgut as a suturing material, as that need not be removed, thus doing away with the liability of tearing apart the united edges.

In young children anesthetics are not necessary, and where cocaine is used it may be applied on cotton instead of by injections. When it is injected a four per cent solution is strong enough.

DR. LEWIS said that complications may be readily overcome by proper measures, such as slitting the prepuce for phimosis, and relieving existing adhesions. When the glans is swollen by inflammation or by chancroids the instruments can not well be used.

He called attention to the fact that if introduced according to his description there will be six double sutures, together with the two single ones makes fourteen, which is sufficient to insure complete and accurate application of the layers, and constitutes one of the advantages described. He always uses catgut, as that requires no further attention. The patients are given charge of the sutures, the ends of which drop off when they have served their purpose. He has used the continuous and closely drawn suture suggested by Dr. Perkins, but believes there will be puckering of the skin from the swelling which invariably follows.

All vessels are invariably ligated with fine catgut, as hemorrhage from small vessels frequently accompanies an erection at night, and produces great alarm.

Speaker considered it entirely unnecessary to use chloroform in any case of circumcision, cocaine being just as effective and less troublesome. A four per cent solution will probably do as well as a ten per cent solution. He had noticed recommendations in the literature, strongly backed by confirmatory evidence, of the efficacy of very weak cocaine solutions, solutions of common salt, or even distilled water. A tension of the connective tissue is produced, which is said to be equally as effective as the use of cocaine.

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DR. W. M. MCPHEETERS read a paper (see page 83) entitled,

MATTERS AND THINGS MEDICAL IN GENERAL.—A BRIEF RETROSPECT OF HALF A CENTURY.

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DR. ROBERT FUNKHOUSER presented two specimens obtained by laparotomy.

The first was a "Double Pyosalpinx and Cystic Ovaries," taken from a woman, 32 years of age, a widow, who had sufferred with pain and tenderness in the pelvic region. She was a complete physical wreck and had lost all desire to live. Examination very readily revealed the distended tubes and the cystic degenerated ovaries. She complained of a constant desire to bear down and had expulsive pains, symptoms which often accompany pelvic inflammatory troubles, and are very readily accounted for by conditions found at the operation.

Speaker emphasized several points suggested in connection with cases of this character. First, he is in the habit of making the incision into the abdominal cavity to either side of the median line, believing that it is less liable to be followed by hernia. This is made light of by a number of operators, but it is exceedingly important in thin persons. Secondly, the condition found demonstrated conclusively that it is impossible to catheterize some tubes. This was especially true with regard to the left tube, and any effort which might have been made would have resulted in rupture. This applies to most cases, the walls often being very thin, especially at the isthmus. Thirdly, speaker thought the

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time would never come when we will be anabled to remove these diseased structures per vaginam, where repeated inflammation had occurred. The parts are so matted together that severe hemorrhage or other conplications might occur, which it would be difficult to meet while working in the dark.

A drainage tube was introduced, an invariable practice of the speaker, but it was removed on the third or fourth day and substituted by gauze wicks. A superficial suppuration occurred at about this time, but the infection was doubtless caused by the patient, who thoughtlessly passed her hand over the wound. As a result the cicatrix is more firm than that which usually follows laparotomy.

The patient made a complete recovery, is perfectly free from pain and is cheerful. Sexual feeling was absent before the operation and has not changed since, so that this case can not be considered of particular interest in that connection. Results of this kind certainly dissipate all doubt as to the advisability of operation in these cases.

The other specimen comprised the "Tubes and Ovaries," which were removed for a long-existing inflammation. The parts were completely matted together and presented the appearance of snail shells, which is often seen in cases of pyosalpinx. There were very firm adhesions to the uterus, Fallopian tubes, broad ligaments, ovaries and the omentum. An important feature in connection with this case was the ease with which the parts could be outlined by a recto-abdominal examination. This was not possible by a vaginal examination.

Speaker exhibited also a brass folding frame which could be placed on any table to establish the Trendelenburg position. This is of particular advantage in fleshy persons.

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Stated Meeting, Saturday Evening, Dec. 22, 1894; the Vice-President, Heine Marks, M.D., in the Chair.

***

Dr. F. D. Mooney presented two specimens of "Fibroid Tumors," recently removed by abdominal section.

The first, and larger of the two, was incorporated in the walls of the uterus and necessitated the removal of that organ down to and including a part of the cervix. It was taken from a patient of robust build, 35 or 36 years of age, who had, however, become anemic and flabby from the loss of blood. She had numerous severe hemorrhages, one on the night before the operation. The upper portion of the uterus was sliced off so as to enable the parts to be operated upon to be reached more readily. The cervix was hollowed out, and then closed by sutures so as to cover the stump with the peritoneum. Six interlocking sutures were placed around the cervix to control bleeding, the stump was dropped back into the cavity and a drainage tube inserted. There was absolutely no oozing and the tube was removed on the second day.

The second tumor was situated behind the uterus, but had no attachment to that organ whatever. It was lying well over to the left side, and was attached to the peritoneum by a small thin band, which was readily ligated off. A sulcus on the tumor showed where the uterus had been lying on it.

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Dr. L. H. Laidley presented a "Gravid Uterus with a Four Months Fetus in Situ."

The specimen was obtained from a woman who had succumbed, on the 20th inst, to an attack of tetanus, resulting from the extraction of a tooth on the seventh. The speaker was called in to give possible surgical relief from a spasm of the larynx. Nothing could be done as the trouble had progressed too far. The patient presented all the symptoms usually accompanying tetanus. The specimen was of interest on account of its rarity, and the complete preservation, the membranes not even having ruptured.

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Dr. T. C. Witherspoon read a paper (see pape 87) entitled,

Hydrochloric Acid in Dihtheria.

Dr. Love thought that the subject is an eminently practical one, and deserving of careful consideration, especially at this time, when we are on the eve of being carried away from established and valuable means of combating diptheria by a remedy which is largely based on theory, whose application is still experimental and whose results are doubtful, to say the least. The Klebs-Loeffler bacillus is established, as is also the fact that diphtheria is primarily a local disease, which becomes systemic by the entrance into the system of the bacillus through the ulcerated patches of membrane. Death ensues from blood poisoning produced by the toxic product of the bacilli. In order to prevent this systemic infection treatment should be directed at the primary focus of the disease, destroying the bacilli and the poisonous membrane. Hydrochloric acid accomplishes this, and is therefore a very valuable agent when the affected area can be reached by it.

Speaker had recently spoken to Prof. Edwin Klebs, who said that the antitoxine is not without its objections. First, its evolvement in the serum of the horse is coupled with dangers to the patient treated by it. Horses are affected with diseases which have no superficial expression, but which are transmissible to the human being. Secondly, the cultivation requires so long a time and is so expensive as to preclude the possibility of general use, and particularly among the poorer classes.

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Dr. A. H. Meisenbach read a paper, describing "Trendelenburg's Method of Performing Pubic Cystotomy." It differs from the old operation only in that the incision is made transversely, and is a curved one with the convexity downward. The advantages claimed are, less liability of wounding the peritoneum, and a larger field to work in and to allow of insection of the

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viscus. He presented also a calculus, recently removed by a cystotomy done in this manner. Also some drainage tubes of original design, by which the bladder is drained with the patient lying on either side.

Dr. Jacobson thought that the old operation, where a vertical incision is made in the median line, answers the purpose in all ordinary cases. The danger of wounding the peritoneum is not great, and where this has happened drainage may be established through a perineal incision. The objection to the transverse incision is the increased liability to hernia.

Dr. Emory Lanphear, being called upon, said the operation just described is to be highly commended. The danger of hernia is no greater than with the ordinary median incision, as union is just as firm after a transverse incision.

The suggestion of Dr. Jacobson, to establish perineal drainage where the peritoneum had been wounded, he considered a good one. It had served him in two cases where the accident had happened, in one of which a bad result was expected on account of a suppurative cystitis.

Dr. A. H. Meisenbach said he would not have brought the subject before the Society in such terms, if it were not backed up by the most eminent surgeons of the continent. Tillmann, in his latest edition of his Surgery, says he operates entirely according to the method of Trendelenburg; and Kocher describes no other operation. No ill results have followed in the hands of these surgeons, and if there were an increased liability to hernia, Trendelenburg would not hide the fact. He would not allow his name to be attached to anything which could not be practiced safely.

We all know what an important part is played by the peritoneum in hernia. When it occurs after abdominal section it is usually due to a poor approximation of the cut peritoneal edges. The bowel thus finds a place to lodge and gradually forms the hernial sac. In this operation the peritoneum is not opened at all, and therefore no weak point is established in the membrane to invite the development of a hernia.

The practicability of the incision is emphasized by the ease with which the fingers may be inserted into the organ, a point of great importance where the depths are to be explored or operated upon. Speaker has been so well pleased with the operation and its results, that he would perform it again at the next opportunity.

Scarcity of Doctors in the Chinese Army and Navy.—The horrors of war now going on between China and Japan appear to be greatly accentuated by an almost inhuman lack of medical men on the Chinese side. From a letter of Captain M'Giffen, Commander of the Chinese war-ship Chen Yuen, we learn that there are only two Chinese doctors to twenty ships and an army of over 300,000 men.—*Ex.*

ABSTRACTS

MEDICINE.

The Fate of Thiersch's Skin Grafts.—Goldmann (*Beitrage zur Klin. Chir.; Edin. Med. Jour.*) says that when a wound has been successfully grafted after the manner of Thiersch, healing occurs without the formation of granulations and with scarcely any cicatricial contraction. After a few months the new skin is reddish and somewhat glistening; it is on the same level as the surrounding skin; it is more or less movable on its bed, and frequently possesses both tactile and thermal sensibility. When the changes in the grafts are examined in detail, it is found that in the first instance there is some desquamation of the horny layer, while at the same time there is active proliferation in the middle layers of the epidermis; ultimately the epithelium as a whole is thin, and the papillæ are of small size. An entirely new vascular network is formed beneath the epidermis, which nourishes the latter, and persists for years, which accounts for the redder tinge of the new epidermis and differentiates it from the surrounding skin. The grafted skin reaches the level of the surrounding skin surface more rapidly when the grafts are placed on a vascular bed; in the forehead this level has been attained in four to six weeks. It fails to attain this level when the grafts are placed on a granulating surface, as in the latter case there will be cicatricial tissue beneath the new skin. After an interval of months the mobility of the grafted skin is so developed that it can be lifted up in folds from the tissue beneath. Return of sensibility occurs sooner at the margins than at the center of the grafted area, and where large gaps have been filled up it may not return at all.

In discussing the anatomical basis of these clinical facts, the writer points out that the normal mobility of the skin on the subjacent tissues depends on the network of elastic fibers which connect the former with the latter. By adopting a special stain for the elastic fibers, he was able to prove that these were abundantly formed in the true skin beneath the grafts, and that they were prolonged right up to and into the papillæ, so as to end immediately beneath the epidermis. The presence of the new elastic fibers, derived from the mother skin, gives the grafted skin greater resisting power, so that it is able to withstand traction and pressure. Inasmuch as granulating and cicatricial processes hinder or prevent this growth of elastic fibers into the graft, we are able to understand why the results obtained are so much better when the grafts are placed on a recent wound than on one which is granulating. It is also to be noted that the development of the elastic network explains the absence of cicatricial shrinking of the transplanted skin. The new vessels which are formed from

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the mother tissue have a greater influence in raising the grafted area to the level of the surrounding skin. In this they are assisted by the formation of elastic fibers and of young connective tissue. In a successful case there is no scar tissue to be seen. The return of sensibility to touch, pain and temperature is explained by the formation of new medullated nerve fibers, which are probably also derived from the mother tissue and which the author has traced into the grafted skin. This method of grafting succeeds at all ages to an equal degree.—New York *Med. Jour.*

Treatment of Infectious Diseases By Irrigation of the Naso-Pharynx.—Dr. A. Heller (*Wiener Med. Presse*) believing that the majority of infectious diseases are caused by inhalation of the pathogenic germs and that their first localization is in the upper respiratory passages, has been in the habit during the past twenty five years of employing irrigations of the naso-pharynx in these affections with the best results. He uses a simple rubber ball with a small tip and injects water which has been boiled and allowed to cool, though any disinfectant may be added. The temperature may vary according to the case. The head is held in the ordinary position and the stream is thrown horizontally through the open mouth two or three times on each side of the pharynx with a slight and equal pressure. The first irrigations are followed by a rapid fall of the temperature and a feeling of ease; the local symptoms, if present, also improve at the same time. The result is most striking in facial erysipelas and in various forms of tonsillitis. In diphtheria he claims that proper irrigation is able to act as a substitute for tracheotomy. He also recommends warm water irrigations in whooping-cough, where they cause a rapid diminution of the attacks of coughing and a decided shortening of the disease; in scarlet fever and measles and in swelling of the cervical lymphatics, where there is often a naso-pharyngeal affection at the root of the glandular involvement. Also in tuberculosis, where the irrigations not only act as a preventive, but also as an actual therapeutic agent; in typhoid fever, articular rheumatism, etc. In pneumonia, bronchitis and bronchial catarrh he believes the irrigations to be an active expectorant. He finally advises their use in eczema of children, which he holds chiefly to be due to an auto-intoxication by the naso-pharyngeal mucus, as well as in the various facial neuralgias.—*Med. and Surg. Rep.*

Strychnine in Snake-Bites.—Dr. James Mc Nish (*Australasian Med. Gaz.*) reports the case of a butcher, aged 45 years, who was bitten by a poisonous brown snake upon the hand. The man was of powerful build and not under the influence of fright from the bite. He had himself applied a ligature, sucked out and scarified the bite with his pocket-knife. He came to the office and while joking over the bite, after eight minutes he suddenly fell to the floor from the chair insensible, with dilated pupils and eyes turned upward. Fifteen minims of liquor strychninæ were immediately injected into the arm; marked improvement soon followed, so that with aid he could be moved about. He seemed very sleepy and begged to be permitted to sit down a moment. Alarming dyspnea soon developed, when another injection of ten minims of the strychnine solution was given; decided improvement followed. A second dyspneic seizure came on accompanied by violent retching. He was then put under a cold shower bath and brandy injected hypodermically. Breathing then became normal and he expressed himself relieved. Three further relapses then followed, which were treated by injection of strychnine, the cold shower-bath and black coffee. The next day he was over the worst and felt well beyond a feeling of nervousness, with slight weakness of the general nervous system, while at the site of the wound there was a sensation of numbness and tingling. The reptile was found to be a brown snake common to North Queensland, four feet six inches long, with well-developed poison sacs capable of holding ten to fifteen minims of poison; when examined they were quite empty. This is the fourth severe and genuine case of snake-bite which the writer has saved by the strychnine treatment. They were all accompanied by violent symptoms and could not be attributed to fright.—*Med. and Surg. Rep.*

Diagnostic Importance of Enlargement of the Cutaneous Veins at the Lowermost Part of the Thorax.—Dr. W. Hirschloff calls attention to the high diagnostic value of these venous dilatations. Affections of the lungs, heart, serous membranes surrounding these organs, mediastinal diseases and those of the great vessels will give rise to such signs. They are in general due to two causes—hindrance to the venous return to the heart and development of collateral circulation. As the veins of the anterior thorax empty into the superior vena cava through the internal mammary, the intercostal veins and the brachio cephalic trunks, a compression of these vessels would cause a consequent enlargement of the cutaneous veins. Compression is generally caused by primary or metastatic new growths of the mediastinal space; lymphomata, lymphosarcomata, substernal strumous growths, or pulmonary neoplasms, aortic aneurisms or enlarged bronchial glands. Often the dilated veins are the first signs of intra-thoracic disease. Another very frequent cause of extensive venous nets forming on the thorax is a preceding contraction of the pleura or pericardium after preceding inflammation of these membranes, frequently occurring years before. This may cause nearly complete obliteration of the greater vessels and even death. Venous dilatations developing in the course of a few hours are dependent upon thrombosis of either the jugular, subclavicular or anonymous veins. As this more frequently is observed on the left side, the corresponding enlargement will be observed on this side. Dilatations from mere mechanical pressure sometimes give rise to very extensive enlargement, even of

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the size of one's finger, as in a case observed by the writer, where from capillary dilatation the arterial pulse was transmitted into these veins so as to cause them to resemble arteries. Yet on deep expiration, this pulsation would cease and the vessels be overfilled. In some cases thrombosis of these veins has been noticed. There is still another form of dilated veins, at the lower portions of the thorax especially. The vessels are prettily arranged in a branched and dendritic manner along the border of the lowest rib. They are dependent upon defective muscular action in this portion of the chest in respiration; they are liable to be quite pronounced in four fifths of emphysematic patients.—*Deutsche Medizinische Wochenschrift;* New York *Medical Times.*

Strychnine in Pneumonia.—Dr. Percy Kidd (*La Sperimentale*) speaks highly of the use of strychnine hypodermically in the treatment of heart exhaustion in croupous pneumonia and other acute pulmonary states of inflammation. It seems to have a sedative and strengthening effect upon the nervous centers controlling the heart and respiration. It will frequently succeed where alcohol and ether fail. He advises its subcutaneous use in doses of one to one and a half milligrams. The condition of the pulse is the chief indication. As soon as it grows small and frequent or the respiratory movements become feeble it must be injected. The results are apparent in ten to fifteen minutes in an increase of the force of the pulse beat and the respiratory movements. Though in general one injection every twelve to twenty four hours is sufficient, it may be administered more often, even every two hours for three or four times, to continue it at longer intervals, as the occasion requires. In alcoholic patients it also acts well, calming the delirium and giving the heart and respiration increased strength by its action upon the cardiac and respiratory centers.—*Med. and Surg. Rep.*

Treatment of Cardiac and Vascular Neuroses.—Dr. Determann (*Sammlung Klin. Vortrege*) has observed in two years 54 cases of distinct nouroses of the heart and large blood vessels. Men were chiefly affected, and particularly those whose occupations as merchants, speculators, etc., exposed them to emotional excitement. Anemia was generally present and the general causes those of neurasthenia. Emotions were usually the exciting factors, though it may be a reflex from other affections, as those of the digestive tract, sexual organs, neuralgias and the so called spinal form of neuralgias. In rare cases a too elevated region may be the cause. Organic symptioms, as murmurs, extension of the heart's dullness and arrhythmia, are quite rare. The pulse-rate may rise upon slight excitement to 96 or 100 a minute, though at the beginning of the attack it may be slowed, especially after fright, with a reaction setting in with increased pulse rate, changes in the color of the face and hands, paresthesiæ in the hands and feet, precordial anxiety and dyspnea. In time the second or paralytic stage is reached, where the pulse is continuously high, 96–120, even occasionally at 140 and over, with a weak beat, the vascular tonus decreases, there is paleness and coldness of the peripheral parts, the nutrition suffers and sleeplessness sets in with depression of mind and irritability. Slight bodily exertions, as arising from a chair, turning around suddenly, or sudden emotional impressions, will then provoke an attack. The irritative and paralytic forms may be mixed. Diagnostically, myocarditis and sclerosis of the coronary arteries will offer some difficulty. A transition of these grave nervous states to actual organic disease he regards as not improbable. The prognosis is not unfavorable with proper treatment and continued attention to hygienic rules. Its course is long and relapses are frequent. Treatment must be chiefly psychic; the causal affection must be kept in mind and removed. The nutrition must be regulated, with plenty of fresh air and exercise. The various preparations of iron and arsenic with valerian are of service, together with hydrotherapeutic measures, electricity, gymnastics, massage of the heart and residence in an elevated region.—*Med. and Surg. Rep.*

Further Experience with Phenacetine.—Several years ago Dr. W. M. Holladay, of Hampden Sydney (*Virginia Medical Monthly*, October, 1894), reported his successful results from the use of phenacetine in trifacial neuralgia. Since that time he has given it for various other ailments, as for example, in both remittent and intermittent fevers, as well as in influenza. He has found it excellent in cases of enuresis in children, five grains at bed time, and in the troublesome, too frequent micturition where there is enlarged prostate, especially where cystitis is present, the urine being made acid; in such cases he gives a large dose, as much as twenty grains at bed time, with the happy result that the patient sleeps better and does not have to arise so often during the night. In diabetes mellitus, twenty grains given morning and night will largely diminish the flow, and whilst achieving that happy result, the specific gravity of the urine is also diminished.

It is in the treatment of typhoid fever, however, that Dr. Holladay has been amazed at its effects. In four cases he believes that phenacetine cut short the disease. Under its use the patients were comfortable, the tongue quickly cleansing; there was no tympanites, no headache, no bowel trouble, except constipation, and rapidly lessening pain in the iliac fossa. These cases, which were typical, had no treatment save the phenacetine, which renders the results more striking. In his administration of the drug the author has never observed any bad effects, and on the ground of his own experience and the observation of others he regards it as the safest coal tar product at present in use. The fact that it contains so large a per cent of available phenol makes it particularly valuable in all fermentative troubles in the small intestine, especially where pain is present. This he thinks is the cause of its helpfulness in typhoid fever and in diabetes, in bladder troubles, etc. The acid be-

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ing eliminated by the urine, has local action on inflamed mucous membrane, but the drug aside from that, seems to have a soothing effect on the whole genito-urinary system.

Diagnosis of the Pneumonic Form of Acute Pulmonary Tuberculosis. — Drs. A Fraenkel and G. Troje (*Hospitals Tidende*) state this to be a rare form of the disease. It may begin with a chill, as crupous pneumonia, or be more insidious, or with a series of lesser chills. The fever soon becomes atypical, more or less remittent or intermittent, which latter sign is a certain diagnostic point to distinguish it from crupous pneumonia. Some patients present labial herpes. The pulse is always moderate, and respiration less disturbed than one would expect from the lesions. Instead of dyspnea and cyanosis, there is an increasing paleness of the skin and mucous membranes. On auscul tation, signs of considerable infiltration of even a whole lobe, thus simulating a crupous pneumonia. Besides pronounced bronchial respiration, extensive crepitation is observed. The most posterior portions of the lung, and generally the lowest lobe, are the favorite sites of predilection. During the course of the disease the dul ness may clear up without signifying an actual resolu tion, for rales are still present. A complete or partial resolution may at times occur. The expectoration is characteristic of pneumonia, in the majority of cases; tenacious, clear and translucent; in a few cases it is rust colored, while in others it presented a grass green color ation which Traube states to be characteristic; hemop tysis may also be present. Tubercle bacilli are found in the majority. Albuminuria is very rare. Ehrlich's diazoreaction is both of diagnostic and prognostic im portance; it was very pronounced in all the fatal cases, but was absent in those that recovered. Delirium was observed now and then, even in non alcoholics. Where the affections begin acutely and the expectoration is lacking, or pneumonic and no bacilli can be demonstrat ed, diagnosis is impossible. If it last for some time, then the following points will be of value: Lack of a typical or final crisis, frequent absence of dyspnea and cyanosis, together with the early pallidity, the green color of the expectoration and the presence of tubercle bacilli. The diazoreaction in the urine from the com mencement; rapid loss of strength and emaciation. The prognosis is very unfavorable.—*N. Y. Med. Times.*

A Case of Pneumo-Thorax from Internal Traumatism.—Dr. S. Laache reports the following curious and instructive case: A sailor of forty-seven years, while eating a meal of biscuits and fish, was sud denly seized with severe pain in the chest at a level with the lower end of the sternum; this he ascribed to a fish bone sticking in his throat. Various measures, together with an injection of morphine, were employed, but without result, and he was sent to the hospital. The pain was quite severe, especially on swallowing, so as only to permit him to take a little milk. Temperature, 39.2° C.; respiration 40, and pulse 100. On physical examination, a moderate sized exudate was found in the right pleural cavity; pains still continued. After six days there was a distinct pneumo-thorax, with amphoric breathing and the characteristic tinkling sound. Badly smelling eructations and breath. The temperature soon became normal, and the outlook seemed better; yet, ten days after the accident, he suddenly was seized with great dyspnea and violent pains. Collapse and death. The necropsy revealed a pneumo-thorax of the right pleural cavity. In the esophagus, two centimeters be low the tracheal bifurcation, there were two oblong openings about the size of a bean, two centimeters apart, and with pus infiltrated edges. The one most towards the right into the corresponding pleural cavity, the other into a purulent infiltration of the posterior mediastinum. The surface of the lung corresponding to the puncture was extensively ulcerated, and on filling the lungs with air, under water, bubbles escaped. He assumed that the air in the pleural cavity was chiefly from the lung; he explains it thus: First, a pleuritic exudate from the pulmonary pleura, due to the septic infection (food); later, pneumo-thorax, after ulceration of the lung. The bone could not be found. It was probably washed out at the post mortem with the pleuritic exudate.—*Nordiskt Medicinisk Archiv.*

(In case of fish and similar bones that have been swallowed and cannot be either forced down or extract ed, it has been recommended to drink frequently of a solution of vinegar or weak hydrochloric acid; they will dissolve the bone in a few hours.—Dr. O. Schliep, *Therapeutic Monatshefte.*)—New York *Med. Times.*

Diagnosis of Incipient Pulmonary Tuberculosis.—Prof. Potain, of Paris (*Revista de Ciencia de Medicas de Barcelona*), in a recent clinical lecture discussed the diagnosis of pulmonary tuberculosis. Diminution of resonance is always relative, and must be elicited by comparison of the two sides; there are in dividuals whose supra-spinous fossæ are normally but little resonant. Percussion of these fossæ is a delicate matter. Have the patient sit slightly inclined forwards, with both shoulders on a level and the arms hanging loosely at the sides. Percuss with equal force in both. Sole diminution of resonance of the apices is sufficient to diagnose tuberculosis, though in most individuals the right is slightly more resonant than the opposite. Yet the very contrary may be present with tuberculosis, in creased sonority from the presence of bronchitis; a lim ited area of augmented resonance in the apex is also suspicious. It is generally accompanied by symptoms assisting diagnosis. Auscultation will reveal a weak ened and rougher respiration. Feeble respiratory mur mur is also a relatively valuable diagnostic sign. In the normal state two kinds of murmurs are produced in the lung—the vesicular and the bronchial—the former pre dominating, and being the only ones distinctly heard. If the vesicles contain solid material this murmur dis appears and only the bronchial one is audible. Hence

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it is a proof of more or less local solidification. Expiration is apparently longer than inspiration. On auscultation the vesicular murmur is interrupted by slight and confused murmurs of bronchial origin. Also respiration may be short and "catchy," from convulsive action of the respiratory muscles. The vocal resonance as well as the thoracic vibrations are increased. Hoarse and sibilant rales are perceived on auscultation, at the beginning; in the vertex these assume a peculiar character. They are heavier, and of a more vibrating sound. Laennec traced them to a softening of the tubercles; this is true, yet they may be perceived from the very beginning. They are due to a bronchitis, and, if located in the apex, are tuberculous in nature. The second sound of the heart may also be transmitted through the lung with greater clearness. In short, the signs of pul monary tuberculosis are those of pulmonary condensa tion and those of bronchitis; their localization in the apex is characteristic of tuberculosis. If the disease has localized itself in some other portion of the lung besides the apex, bacteriological examination of the sputa will be necessary, though, unfortunately, just at the very stage when the diagnosis is liable to be doubtful, the bacilli are apt to be exceptionally present. They are to be found chiefly when the other signs are pronounced and certain.—New York *Med. Times.*

Cold Water as an Antipyretic.—Dr. Fisher (*Post Graduate*) has arrived at the following conclusions:

1. That cold water is the best antipyretic used to-dry.
2. That it is easily obtainable, and is therefore adapted to all classes of cases, both rich and poor.
3. The mode of application is so simple that it adapts itself to the hospital, and equal as well to private practice, and can be applied without any distinct training.
4. Cautiously given, it stimulates.
5. Carelessly used, and longer than required, it depresses, and will produce sub normal temperature.
6. That rectal temperature should be taken and the bath at once discontinued when temperature falls to 101°, as it will then continue to fall.
7. That a stimulant administered before the bath may be necessary, and should be given where there is a feeble heart.
8. That the temperature indicates when to commence, and when, also, to discontinue the hydropathic treatment.
9. Unnecessary blanketing after the bath is injurious, and will produce copious perspiration, which I believe weakens the patient.
10. The temperature of the room should always be between 68° and 72°.

Bone-Marrow in Anemia and Leucemia.—Dr. Fraser (*Sem. Med.*) reports good results from the use of raw bone-marrow (from the ox or calf), in a patient who had been affected with grave anemia since several years, and had been treated in vain with ferruginous and arsenical preparations. The dose was about 100 grammes (3½ ounces) a day. Under the influence of this treatment, aided by the use of iron and salol (of the latter 1 to 2 grammes [15 to 30 grs] daily), there was noted in three weeks an evident improvement in the general condition; there was a considerable increase in the number of red blood corpuscles and in the proportion of hemoglobin. After a few more weeks the patient began to work, and was soon considered cured.

This fact induced Dr. Bigger (*Sem. Med.*) to employ the same treatmant in a boy, 12 years old, affected since long with splenic leucemia, and very weak. The spleen filled nearly the entire half of the abdominal cavity, extending as far as the corresponding iliac fossa, and exceeding the median line by about 5 cm. (2 inches). Diarrhea, frequent epistaxis, dyspnea, and palpitations present. The lymphatic glands were not swollen. The patient was given, three to four times a day, a piece of bread on which a thick layer of raw bone-marrow was spread. After eight days of this treatment the icteric color of the skin disappeared, and the general condition improved notably. A fortnight later, febrile movement had ceased, the patient was able to walk without experiencing dyspnea or palpitations, and the spleen commenced to diminish in size. At the date of this report, the dimensions of this organ were normal, and the general condition was excellent.—*Am. Med.-Surg. Bulletin.*

NOTES AND ITEMS

Billroth, Holmes, Helmholtz, and Goodell.—Wherever the Angle-Saxon civilization has penetrated, this quartet of great names is mentioned with profound esteem, yes, with reverence. There is something eloquent in the passing of four such great men of science in rapid succession.

The Occident and Orient sent their students to Vienna to sit at the feet of Billroth, like the apostle of old at the feet of Gamaliel. I shall never forget my first impression of Billroth. It was the year of his jubilee which commemorated twenty five years of service as professor, and the last course of lectures but one he was destined to give. The little clinic was packed to suffocation and an air of expectancy prevailed that was intense. At last the door opened and with that air of quiet, unassuming dignity and kindness that endeared him alike to patrician and peasant, attired in the long coarse linen hospital gown, the Grand Old Man of medicine entered, attended by his corp of assistants.

I have heard 50,000 Germans salute the Iron Chancellor with Die Wacht am Rheim; I have seen emperors and queens receive the plaudits of their subjects, but the great shout which shook the massive walls of the old hospital was not inspired by "the boast of heraldry

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or pomp of power," but was the tribute of men of all the nations of the earth offered to genius; the genius that has alleviated human suffering and lengthened life, and that appeals to our humanitarian instincts like thespirit of St. Paul or of Marcus Aurelius; the genius whose sympathies include the whole brotherhood of man. No one could be unmoved by such a demonstration, and as I beheld that venerable form and patriarchal mien I could think of but one other character in history—Moses, the Law-Giver.

To add anything to the volumes of eulogy on Holmes and Helmholtz would be only tiresome repetition, but reviewing this group of men collectively several things impress us very forcibly. Born amid the most divergent circumstances, educated in the most dissimilar atmospheres, there are yet certain determining influences in common which led them up to fame alike.

All were university men, and their careers began upon the broadest educational basis. All honor to the self-made men, but the fact remains, and should ever be kept before the hustling American who hopes to leap to eminence and opulence in the learned professions by the business college route, that the great savants of science have ascended those airy heights only by patient and unremitting toil through all the years alotted to human endeavor.

These men were laboring men in the true sense. Not eight hour workers, but twice that time was too short a day for the tasks allotted them. They never knew rest until Nature, the kind old nurse whose secrets they so unceasingly searched, took them to her bosom.

All were men of the broadest cosmopolitan character, honored among the nations with whom knowledge is the power. Their versatility is shown in the contribution of Holmes and Billroth to the general literature of their countries.

Professor Goodell is less known abroad than Dr. Holmes; his intellectual scope was not so great, but his name has come into especial prominence recently in America through his powerful plea for conservatism in gynecology. It is not apropos to discuss this point here, for his fame rests upon something more substantial than a passing discussion, which, to say the least, has influenced for good our medical hemisphere; but his "Lessons in Gynecology" is an enduring pillar in the temple of our science erected by a discriminating and scientific mind.

The lives of such men, filled with noble deeds of self-sacrifice for humanity, will never attract the adulation of the historian. There is something pitiable in the ignorance of the press and public regarding their work for suffering humanity. The camp, the battle-field, the intrigues of state have ever charmed the poet and historian; but in the silent night watches when the balance of life and death trembles in the hands of the physician, alike in the poverty-stricken hovel or in the palace of the rich, are wrought deeds of heroism unsung, inspired by the genius of those who now are dust.

"E'en in their ashes live our wonted fires."

We believe with Hippocrates, that "the highest gift which the Gods have conferred upon men is the power to heal their fellow creatures," and that these hands which have wrought so untiringly for science and humanity—

"A richer meed of praise shall claim
Than all that wait on wealth or fame."

—Minor Morris, in *Indian Medical Journal.*

Medical Etiquette Among the Ancients.—In an old Latin poem, the manuscript of which has been found in the National Library of Paris, occur some interesting pages in which the author, whose name is unknown, explains the proper conduct of a physician:

"On approaching the patient, you should assume a calm expression and avoid any gesture of greed or vanity; greet those who salute you with an humble voice and sit down when they do. Then, turning to the sick-person, ask him how he is, and examine his pulse and his urine. To the patient you promise cure, but immediately on leaving the room you say to the relatives that the disease is grave. The result will be that, if you cure him, your merit is greater and you will receive the greater praise and fee; while, if he dies, they will say that you had no hope from the first."

This counsel has been well followed by some physicians to the present day. The directions for table manners are equally amusing:

"When those who preside over the house ask you to the table, conduct yourself in a seemly manner. Each time that a new dish is brought on, do not fail to ask for the condition of the patient. This will give him great confidence in you, as he sees that in the midst of the variety of the repast you do not forget him. On leaving the table, return to the patient, and tell him that you have dined most excellently, and that everything was served to perfection. The sick person, who was anxious about these points, will rejoice at your words."
—*Boston Med. and Surg. Jour.*

Cure for Stammering.—A gentleman who stammered from childhood almost up to manhood gives a very simple remedy for the misfortune: "Go into a room where you will be quiet and alone, get some book that will interest but not excite you, and sit down and read two hours aloud to yourself, keeping your teeth together. Do the same thing every two or three days, or once a week if tiresome, always taking care to read slowly and distinctly, moving the lips, but not the teeth. Then, when conversing with others, try to speak as slowly and distinctly as possible, and make up your mind that you will not stammer. Well, I tried this remedy, not having much faith in it, I must confess, but willing to do most anything to cure myself of such an annoying difficulty. I read for two hours aloud with my teeth together. The first result was to make my tongue and jaws ache, that is, while I was reading, and the next to make me feel as if something had

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loosened my talking apparatus, for I could speak with less difficulty immediately. The change was so great that everyone who knew me remarked it. I repeated the remedy every five or six days for a month, and then at longer intervals till cured.—*Family Doctor.*

Character.—A man who fleeces the public, and thus injuries the reputation of the profession by charging fees farcically outrageous for inconsiderable operations needs to be incontinently squelched. * * * The most successful physician is not he who has most patients and makes the most money, but he who most successfully cures disease. The best teacher is not necessarily he who talks the glibbest or who is the most "popular;" but he who helps his pupils to learn the best and most accurate knowledge and who inspires them with the enthusiasm for knowledge and for the relief of human ills. * * * In no way can we mold the future and make the world better for our children, freer from disease, than to encourage the formation of noble medical character by helping to office and by rewarding and consulting with those who are seeking to keep their characters pure and clean.—*Med. News.*

Clean Thermomters.—Those who are constantly preaching the germ causes of disease are the very fellows who many times are equally as careless as their unbelieving friends. How frequently do we see physicians take the temperature of their patients, regardless of the existing disease, wipe the instrument with their handkerchief, which is the most liable linen to be full of germs, or a towel, or even use the sheet, and carefully place it away in a case prepared with a small amount of absorbent cotton in the bottom to keep from breaking, and unintentionally preserving the germs from time to time, to be conveyed to the next unfortunate, who may be the first patient called upon. This seems to be a very simple thing to discuss, but any reasonable person can readily see the necessity of having his thermometer thoroughly cleaned every time it is used. It should be washed with soap and water, and if any cotton is used in the bottom of your case, let it be sublimated cotton and occasionally renew it.—*Charlotte Med. Jour.*

Gold Mines in Cemeteries.—A writer in *La Temps*, of Paris, has been traveling in America, and, of course, relates his "impressions." What struck him particularly was not the Falls of Niagara, the inquisitiveness of reporters, or the consumption of pie, but the fillings in American teeth. He has consulted the statisticians and finds that the amount of gold annually pounded into our dental cavities reaches the respectable figure of 800 kilogrammes, representing a value of half a million dollars. All this precious metal is buried with the Yankees when they die, and consequently at the end of three short centuries the cemeteries of the United States will contain gold to the value of $150,000,000. He thinks this will prove too tempting to the practical mind of the future American, and foresees the day when companies will be organized to mine the cemeteries and recover the gold secreted in the jaws of deceased ancestors.

Fatal Effects of Sewage.—Have you ever kept goldfish? If so, you know that it is necessary to have growing vegetation in the jar the fish inhabit; and why? Because the waste or sewage from the fish themselves, if consumed by them, will prove fatal to them. All animal waste must pass through vegetable life, back again to animal life, and if this natural cycle be interfered with, fatal results ensue. That which is true of goldfish life is equally true of human life; if sewage, which is the waste of human life, comes back to us in the water that we drink, the air that we breathe, and the food that we eat, without having previously passed through vegetable life, health and life will suffer therefrom. Animal death supports vegetables life, and vegetable death maintains animal life; this is Nature's cycle of organic matter, and it cannot be interrupted with impunity.—*Annals of Hygiene.*

Influence of Coffee and Its Substitutes on Disease Germs.—This subject has been investigated by the Russian bacteriologist, Proteorowski, who arrives at the following conclusions (New York *Medical Times*):

1. An infusion of coffee, when taken either as a hevrage in the ordinary way, or with meat boullion, undoubtedly acts as a disinfectant.

2. The disinfecting properties of coffee depend on the formation of certain constituents during the process of roasting; also on the tannic acid which it always contains.

3. The germicidal efficacy (such as it is) of acorn-coffee, rice coffee, etc., is likewise developed by roasting.

4. An infusion of coffee or one of its substitutes, made with water only, is a much better disinfectant than another of the same strength but mixed with meat boullion.

5. A pure watery infusion of coffee of the usual strength kills the bacilli of cholera within three hours, typhus bacilli in one day, and the spores of the Siberian plague within nine days. Coffee substitutes, in like infusions, destroy the two former species of germs, but not those of the plague.

Anemia.—Chlorosis.

℞ Gude's Pepto-Mangan., - - - - 1 bottle.
Sig. Teaspoonful three to four times a day.

Fermentative Dyspepsia.

℞ Marchand's Glycozone, - - - 1 bottle.
Sig. As directed.

℞ Sennine, - - - - - - - - - ℥j.
Aq. menth. pip., - - - - - - fl℥iv.
M.
Sig. Teaspoonful three times a day, half an hour after meals.

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THE STUDY OF PROPER FOOD FOR INFANTS is a subject that no practitioner of medicine can afford to neglect, since quite a large number of his patients belong to this class and no other patients appeal so strongly to the sympathies and solicitude of the doctor. The result of his treatment of these little people must necessarily be a large factor in his ultimate success, for the eyes of the whole neighborhood are upon him and the case may terminate in such a way as to either make or mar his reputation.

Dr. J. A. Work, of Elkhart, Ind., read in the Section on Diseases of Children, at the forty-fifth annual meeting of the American Medical Association, held at San Francisco, June 5-8, 1894, an article on "Over-Fed Infants" and among other things he said: "The result of over-feeding is the leading factor in the very great mortality in infancy and childhood. It is true that quality of food plays an important part in the ailments of children. Even in considering the zymotic diseases of children, by which disease so often fond hopes are blighted, we must admit that the mortality is largely due to over-feeding prior to the inception of the disease. The disease is severe or not, according to the fermented condition of contents of the alimentary tract. The decomposed contents of the *primæ viæ* is a fertile field for the rapid propagation of bacilli or disease germs. Thus the severe form of the disease."

Now if an infant can not digest its food we might say, with equal correctness, that it is over-fed, since the food acts as so much foreign matter—fermentative decomposition taking place with the mal-products of nutrition. In a great number of these cases the digestive organs have been so over-taxed and abused that a state of inanition results, in which the secreting glands are sluggish and slow to respond even to the most careful dietetic and hygienic measures. Nature needs assistance—a remedy that will carry on the process of digestion and gently stimulate the secretion of the digestive fluids and give tone to the whole alimentary tract. Pine-Apple Digestive Wine (Zumo-Anana) is an ideal remedy in these cases. Give it a thorough and impartial trial and be convinced.

NEURASTHENIA, CHOREA, MIGRAINE, ETC.—In an experience of twenty years' practice of medicine I wish to state enthusiastically and truthfully that in the treatment of Neurasthenia, Chorea, Migraine and all of the Convulsive and Reflex Neuroses, I have found a specific in the preparation called "Neurosine." I am under the most profound obligation to a brother physician who brought it under my observation, as also are my patients.

F. O. BRAINERD, M.D., Oakley, Kan.

NEWBERN, IOWA, August 8, 1892.

W. S. MARSHALL, Centralia, Ill.—

DEAR SIR—I have received your Buggy Case Saddle-Bags, with which I am highly pleased. They are perfection.

Respectfully, S. W. THOMAS, M.D.

AFTAR AN ATTACH OF THE GRIP the patient finds himself in a state of extreme weakness and prostration from which condition he is tediously brought to his former good health. Remedies which stimulate his exhausted nerves too vigorously do so at the expense of his general condition. Then comes the relapse. Syr. Hypophos. Comp. McArthur conveys to the tissues the revivifying and vitalizing agent phosphorous in its most oxidizable and assimilable form. Thus the true vitality of the nerve structure is restored by renewing the nutrition of the tissues themselves.

DODGEVILLE, WIS., January 16, 1895.

DIOS CHEMICAL CO., St. Louis, Mo.—

GENTLEMEN—I take great pleasure in recommending the excellence of your "Dioviburnia." After three years of its continued use I cheerfully testify to its efficiency.

T. H. HUGHES, M.D.

PARAGRAPH from paper "The Hand in Railway Surgery" by C. B. Lyman, M.D., Surgeon to the Union Pacific System, Denver, Colo., which appeared in January 1st issue of *The Railway Surgeon:*

L. N., a section laborer, had a rail fall, striking his hand; it caught the ring finger of the left hand, cutting it completely through, with the exception of a small bridge of tissue on one side, which included the artery on that side; the parts were thoroughly scrubbed with soap, ether and corrosive sublimate solution; the fragment was stitched in place, a "Sennine" dressing and splint applied, union took place promptly and a serviceable finger resulted.

ATTENTON of the profession is called to the advertisement of Dr. Arnold's Zymotoid, the new diphtheria cure, and the very unusual and advantageous terms by which the proprietor seeks to make its merits known. If this new remedy will do half of what is claimed for it, it will prove a great boon to the profession. It is guaranteed to give individual satisfaction to all who order it, or there will be no charge, and its range of application in disease is remarkably extensive. Nothing can be fairer than Dr. Arnold's propositien, and we hope the readers of the MEDICAL REVIEW will thoroughly test the remedy.

AT THIS SEASON OF THE YEAR, when radical and sudden thermal changes are the rule, it becomes of vital interest to the busy practitioner to have in compact, ready form, such approved medicaments as meet the analgesic and antithermic requirements of the bulk of his patients. As pertinent we call attention to the following combination tablets: "Antikamnia and Codeine," each containing 4½ gr. antikamnia and ¼ gr. codeine, "Antikamnia and Quinine," each containing 2½ gr. antikamnia and 2½ gr. quinine, "Antikamnia and Salol," each containing 2½ gr. and 2½ gr. salol, and "Antikamnia, Quinine and Salol," each containing 2 gr. antikamnia, 2 gr. quinine and 1 gr. salol. These together with the well-known "Antikamnia Tablets," of varied sizes, and "Antikamnia Powdered," constitute in indispensable factors in the armamentarium of the physician, and are more than ordinarily indicated in present climatic conditions.

Dr. Manley has employed Cocaine as a Local Anæsthetic in many surgical operations in different portions of the body during the past six years, and with increasing satisfaction. In the book before us he gives the results of his work, first discussing other Local Anæsthetics and giving some considerations on Anæsthetics in general. The materials and technique of local Anæsthesia other than that of Cocaine are also discussed, and many useful hints given.

The main portion of the book is devoted to Cocaine Analgæsia. Surely this will interest all surgeons; they will find them suggestive and, as expressing the results of his work, helpful in the study of allied problems. Many illustrative cases are detailed, showing graphically the practical working of the method in definite cases. With this experience before them many surgeons will find the use of Cocaine very helpful in managing many of their operations.

—*The American Lancet*, Detroit, Mich.

WASHINGTON, D. C., August 18, 1894

SEARLE & HERETH CO.—

GENTLEMEN—I duly received the sample of Tritica and applied the same at once to a case which heretofore had not seemed to yield to treatment—Enlarge Prostate and Inflammation of the Neck of bladder. Patient had taken the entire bottle and reports to me this morning as cured. Upon examination per rectum I find prostate has assumed normal proportions and bladder in normal condition. I can say that it (Tritica) has done all that you claimed for it.

W. A. JACK, M.D.

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ORIGINAL ARTICLES

Observations on the Abdominal Viscera in Seventeen Autopsies.

BY BYRON ROBINSON, CHICAGO,

Professor of Gynecology in Chicago Post-Graduate School.

In the following observations I think will be found some practical points for the general practitioner. Many of the remarks may be of no value to him, but if he will take time to read the whole brochure he will gain some facts which he will frequently be able to use in practice. The ability to make a diagnosis in abdominal diseases depends on a man's knowledge of the visceral structure, position and function. These cases were carefully noted and though some points may seem described too much in detail, yet it will only fix on the physician's mind relations. The autopsies were performed in Cook County just as they came and were all adults. I was allowed the courtesy and privilege of making the examinations through the kindness of Drs. Hecktoen and La Count, pathologists, and the internes, Drs. E. Tinen, Geo. Skinner, R. Ryan, Erhmann, Fred Tice, Oleson, McGrew and Williams. The especial object was to observe the position of viscera, the anatomy, pathology and especially the condition of the peritoneum and the utilization of all for diagnosis and surgical procedures. Besides the anatomy and consequently the pathology of the abdominal viscera are not generally very accurately known among practitioners. It is my desire also to emphasize the view that peritonitis is as a rule purely local and that inflammation is very liable to occur in definite and fixed regions. On opening the body the first object of study was the omentum. In two cases no omentum was in sight and in two more cases scarcely any was visible. Practically four cases in the seventeen showed no omentum on opening the abdomen. In these four cases the omentum was rolled up and lay above and behind the transverse colon. In one case of tubercular peritonitis, the omentum was rolled up solidly to the thickness of an inch. The omental roll extended two-thirds of the distance across the abdomen above the transverse colon on the left side. So far as could be ascertained the rolling of the omentum was a gradual and slow process, not a sudden or accidental matter, but due to some slowly acting force. And as the rolling was similar in all four cases it must be a common force. In thirteen cases the omentum was distinctly spread over the left four-fifths of the abdomen below the transverse colon. In the thirteen cases it reached to the pelvis and could be drawn through the inguinal and femoral orifices. In fact in one case there was an old femoral hernia of the omentum with solid adhesions. The omentum passed fully two inches in the femoral sac. A peculiar feature in the seventeen cases was that the omentum in not one case covered the cecum. In nearly every case the omentum left uncovered two to four inches of the lower end of the ascending colon. This is a very significant matter when appendicitis is considered for, in not one of the seventeen cases, would the omentum be present to act as a barrier to check appendicular inflammation. Another feature in the case was that generally the omentum was in a peculiarly small roll on its right border and the roll lay just to the left of the ascending colon. This roll appeared from its method of formation to be gradually and slowly made—that it was not a sudden process. Some slow gradual force seemed to form the roll of omentum on its right border just as it did in rolling it up and depositing it above and behind the colon. In all the seventeen cases the omentum tended to the left because it is originally developed from the meso gastrium and also the position of the spleen drags it toward the left. In most of the cases the omentum was thin and fatless. The older the subject the less easily did the omental layers separate. The part rolled on the ascending colon at the lower end is noteworthy. The value of the omentum in the human economy until recently has not been generally recognized. It may generally be noted that wherever inflammation occurs in the abdominal cavity the omentum becomes fixed to that region. It seems to have a predilection for inflamed regions. It may be asked how does the omentum become so generally and certainly fixed in these notoriously inflamed districts? I have seen no explanations of this matter. But it appears to me that when a district becomes inflamed the bowel walls become still from paralysis while the non-inflamed bowels continue their peristaltic motion. Now, as soon as bowel motion forces a piece of omentum into an inflammed district it at once becomes adher-

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ent from its sticky exudates. Peristalsis then forces more omentum toward the fixed point and it is a common observation to find the omentum fixed in the peritonitis region and guarding against further infectious invasion. The use of ementum becomes very plain by a few experiments and observations on dogs' viscerae and human autopsies. The omentum is:

a. A man-of-war.

b. The patient's protector.

c. The surgeon's friend.

1. The omentum prevents the invasion of infection. It is like a man-of-war, ready at a moment's notice to move to points of danger. The omentum quickly builds barriers of exudates to check invaders. It circumscribes infectious products. It prevents general peritonitis. It is the surgeon's greatest friend. It buries and starves dangerous microbes. The omentum can be frequently seen guarding the infection from spreading from the pelvis, appendicular or gall-bladder districts—three great peritonitic regions.

2. The omentum prevents the adhesion of the bowel to the anterior abdominal wall. After experiments on the abdominal viscera of dogs, I frequently found, in the dogs' killed at varying periods, the gut firmly fixed for several inches to the belly wall. This firm adhesion must destroy normal peristalsis. Fixation of a gut-wall for a distance is liable to check the fecal current, though the gut lumen is patent from curbing natural peristalsis.

3. The omentum facilitates visceral movements.

4. It is said to regulate the tidal currents of the peritoneum, to curtail the quantity of intra-peritoneal fluid (Tait).

5. The omentum often acts as a plug for visceral wounds. In shooting some sixty dogs for intestinal experiments I often found that it would act actually as intestinal wall and prevent the escape of its contents. It is the patient's protector in innumerable ways.

6. It will act as a mechanical protector by surrounding the gut in hernia, thus preventing the sharp edge of the ring from cutting into the bowel wall. By its pad ding around the gut it prevents bowel strangulation and no doubt this accounts for existence and even recovery after many days of strangulation. Again I have seen an extensive omentum from one-fourth to three-fourths of an inch thick hide almost every abdominal viscus from sight after opening the abdomen. Such omenta tuck the organs out of sight like a bed-quilt. This kind of omentum serves to prevent infectious invasion, to plug up and circumscribe visceral perforation, to prevent adhesions, to check hernial formations, to lessen the chances of sigmoid vulvulus, to confine pus and to preserve the viscera from trauma.

7. The omentum—the surgeon's friend and protector against infectious invasion—is said to keep the intestines warm. This assertion is not proven by comparative investigation on many of the lower animals. Infants have but little omentum. The cetaceans have a very slight development of omentum; hence the theory that it is to prevent the loss of heat loses its significance. Dogs have projecting flukes of peritoneum filled with fat 2x3 inches. They resemble the appendices epiploicæ.

8. The development of the omentum from the mesogaster shows that it has some important function in the animal. It is not a retrograde process, not the result of adhering peritoneal folds. It is not a remnant nor made of folds prepared for other objects. It is not a vestige of dying parts, but a progressive, definite formation.

9. The omentum stretches from the stomach to some other organ. It is composed of four layers, quite separable in early childhood but gradually fusing with adult years. It is perforated by innumerable small holes and may have fat deposited in it in elegant streaks along its big vessels or be heavily loaded with an inch of thickness of adipose tissue. It is not a storage for fat, for the camel and some other animals store fat in a large hump. Hibernating animals do not specially store fat in the omentum. My examinations of animals below man and embryos has convinced me that the great omentum is not formed as is usually accepted by fusion of its layers over the colon, but it is formed by the lower part of the great omentum being appropriated by the growing and rotating colon.

10. Removal of the omentum has not defined its function, nor furnished us definite disturbances. It is only part of the great mesentery.

11. It is probable that the omentum is more frequently found in the peritoneal sac than the bowel.

12. Portions of omentum will live in the peritoneal cavity when torn entirely off the omentum. In dogs I proved that severed grafts from the omentum always survived and became adherent to some viscus.

13. The omentum is subject to malignant growths, fatty tumors, hydatid cysts, suppurating and non-suppurating cysts and hernial conditions.

14. The rolling of the omentum has perhaps chiefly to do with dilatation and contraction of the colon. It seems to me that it is produced by the expansion and contraction of the lower end of the colon.

15. In the seventeen bodies the omentum only covered the cecum once and in nearly every case the lower one to four inches of ascending colon were also uncovered. This is very significant as it lessens the chance of life in suppurating appendicitis by offering no barriers to pus.

16. In various localities, away from peritonitic regions, we found the omentum occasionally adherent to the gut-wall by old peritoneal adhesions—perhaps where infection has passed through the gut-wall and was checked by omental barriers.

17. The limits of the omentum vary within wide limits. Children have very little omentum.

18. The omentum tends to the left side and covers the mass of coils of the small intestines. This protective covering through the ages may explain the fact that peritonitis among the small intestines is a very fatal

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matter—omental protection for ages has not prepared the small intestinal peritoneum to resist infection. Like a spoiled child when trials of infection come no ability to cope with the invader exists.

19. Omental hernia is in the vast majority of cases on the left side. In one of the seventeen cases there was a left femoral omental hernia.

20. The most significant role played by the omentum in preventing the invasion of infection—in short in limiting peritonitis—is in regard to the three great peritonitic regions, the pelvic, appendicular and gall-bladder districts. In these three districts the omentum acts as a barrier with exudates to stop frequently infectious invasion. It is so common to observe the omentum with peritoneal exudates circumscribing and confining infectious products in the pelvis at the mouths of tubes. Again the omentum may be frequently seen guarding the ruptured appendix and also the ruptured gall bladder.

21. I have frequently found holes in the omentum in autopsies and loops or segments of bowel protruded through them. This is a dangerous condition for strangulation from mechanical or other processes is apt to arise at any time. In two dogs on which I performed experimental intestinal operations I tore a piece of omentum 3x3 inches from toward the middle of the great omentum for the purpose of a graft to wrap around the wounded gut. The dogs were killed probably a month after the experiment and in each case five to eight feet of small bowel was found protruding through the artificial hole in the great omentum. Such an intestinal protrusion would probably do no harm until some mechanical impediment arose. I found that grafts should be torn from the edge and not from the center of the omentum.

22. Tumors may be rotated and twisted off their axes and entirely nourished by the omentum. I removed a dermoid the size of a cocoa-nut from a woman where it had twisted off of the ovary and was well nourished by the lower end of the omentum. The omentum will also nourish other tissue masses. The above mentioned tumor had been twisted off its axis two years previously when a severe attack of peritonitis was experienced.

23. It appears to me that the omentum like other great peritonitic regions is more capable of throwing out exudates and resisting infection than some portions. The omentum does not readily absorb infection, but resists it—it has learned the process through ages, while many parts of the peritoneum so readily absorb infection that it kills outright, no peritonitis or exudates can arise or resistance be offered. In fact the omentum is another great peritonitic region capable of resisting infection to a high degree.

24. The lower animals have other peritoneal folds than omenta, projecting into the peritoneal cavity. They are analogous to the arachnoid or choroid plexus of the brain and serous folds projecting into joints. Are they arbiters of serous currents? (Tait).

In the measurements of the colon many variations arose. The ascending colon was measured fourteen times out of the seventeen. The shortest ascending colon was six inches. The longest was nine inches. The average length of the ascending colon in fourteen cases was seven and one-half inches. The transverse colon was measured ten times. The longest transverse colon measured forty two inches, the shortest twelve inches. The average length of the transverse colon in ten cases was twenty-three inches. The descending colon was measured fourteen times. The longest descending colon was nine inches, the shortest was seven inches. The average length was eight inches. The sigmoid was measured in fourteen cases. The longest sigmoid was twenty-six inches and the shortest eight inches, while the average length in fourteen cases was seventeen inches.

As the transverse colon is always longer than a line stretched from the hepatic to the splenic flexure it must assume a folded condition. We found in our measurements of ten cases that it averaged twenty-three inches. The longest was forty-two and the shortest was twelve inches. The variation in length was no less than thirty inches. A direct line from the hepatic to the splenic flexure will average perhaps twelve inches; hence we must expect the rest of the transverse colon to assume various kinds of folds. I made special observations in regard to the position of the loops of the colon. In the seventeen cases only two are marked as having a colon loop extending below the ilial crest. A few of the other cases had colonic loops which extended to a level with the iliac crest but even in the one case (3) which had a forty-two inch transverse colon the loop did not extend below the iliac crest.

The interest in regard to the transverse colon so far as the gynecologist is concerned is very great. This interest lies in the peculiar loops which it is compelled to make on account of being longer than a straight line between the splenic and hepatic flexures. The colonic loops are either V- or U-shaped. The seventeen cases showed two kinds of colonic loops. One kind occurred at each end or at the flexures. The loops which occur at each flexure are generally V-shaped. When the colonic loop is in the middle of the transverse colon it is generally U-shaped.

V-shaped loops are often short, and besides, a bend may also exist in the middle of the colon. The U-shaped loop is generally single and involves the whole of the transverse colon, allowing no bowel for V-shaped loops. The special interest of the abdominal surgeon lies in the U shaped loops as they frequently extend into the pelvis and lie in contact with the genital organs, the bladder and the rectum. I saw one U-shaped colonic loop extend into the pevis in one case and a gynecologist operated. The loop of colon lay on the bladder and he unfortunately attempted to reach the inflamed tubes and ovaries by tearing through the meso-colon. In doing this he simply tore through the anterior meso-colic layer and got tangled up in it and the in-

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flammatory pelvis adhesions were so numerous that he abandoned the operation leaving it unfinished. He got lost in his anatomical landmarks. He neglected to search out the appropriate lines of anatomy and cleavage. Unless one remembers these long bowel loops he may be come entangled and lose his bearings. What causes these colonic loops? From a careful examination of a large number of cadavers and dogs' especially dying from peritonitis I am disposed to consider them arising from chronic constipation and peritonitis.

If a subject has a long transverse colon and it becomes loaded to various degrees with feces the force of gravity will induce the least supported part—the middle of the colon—to descend toward the pelvis. A colon of twenty-five inches long can easily reach the pelvis. Now, after this colonic loop has been formed and descended into the pelvis inflammation, peritonitis and adhesions may arise. The colon is continually dilating and contracting so that its various parts touch each other in dilation. In peritonitis the bowel becomes paralyzed and widely distended. The walls of the widely distended bowel lie in contact and become stuck together with exudates. As the peritonitis recovers the bowel loops remain adherent to each other. In Fig. 4 the ascending colon may become adherent to the descending limb of the loop and in the same manner the descending colon may become fixed to the ascending limb of the loop. The great U-shaped loop itself may become so adherent that it looks like a double bowel. However, in my observation the V-shaped loops at the colonic flexures are the most apt to become adherent because from fecal irritation at the flexures peritonitis is more apt to arise than at the large U-shaped loop It would appear that such sharp bends in the large bowel would be liable to cause fecal obstruction. But in over two hundred operations on dogs' abdominal viscerae I never once saw obstruction of fecal current produced and the bowel kinks were of almost all kinds. However, it must be observed that bowel strictures do occur at flexures more than in straight lines. But such structures are generally of slow, progressive inflammatory growth. The hard feces containing sharp, rough foreign bodies abraid the mucous membrane and deeply wound it as they pass around the acute angle of the gut. With mucous membrane wounded a road for infection is created and the infectious process through all the bowel coats and the peritoneum induces thickening of all the coats. The stricture is the result of gradual accumulation of white connective tissue. Such strictures are apt to occur at the sharpest flexure, *e.g.*, the splenic. The constant trauma may at times end in malignant strictures.

Again the loops of colon may be arrested from congenital malformation or better from pentonitic bands. Dr. Lucy Waite and myself observed one such case in an infant autopsy, and in one adult during an operation for appendicitis.

In both these cases the appendix and cecum had not descended below the liver. In another case (autopsy) I saw and carefully noted the peculiar loop induced by the non-descent of the cecum and half rotation of the descending colon. In such congenital cases as the cecum passes transversely across the abdomen and becomes arrested at the liver, the colon descends almost as it does at the right side. It appears that the cecum is simply hung from the liver and the descending colon is reversed. In these cases the ilium frequently enters the colon from behind and to the right. This is a very significant matter to an abdominal surgeon in cases of appendicitis. Two weeks ago Dr. Barber, of this city, called me to see a case of a young man thirty years old. He had two distinct chills in two weeks. His pulse varied from 95 to 130. His temperature varied from 99 to 102. His pain and distress was located just under the short ribs—under the liver. My diagnosis was first appendicular rupture, or second, gall bladder rupture. There was nothing to feel in the right iliac fossa. But my visceral and post-mortem work had taught me that the cecum and appendix may be arrested and remain immediately under the liver. Dr. Waite and I operated and it proved that the appendix and cecum were fixed under the liver and that the appendix had twice ruptured from a piece of hardened feces. The peculiarities and biological variations of the viscera gave material aid in operating on what the uninitiated call puzzling cases. Of the colonic flexures the splenic is short, acute, and very liable to strictures from collections of white connective tissue, while the hepatic flexure is obtuse in its angle and not very liable to inflammatory strictures. The splenic flexure lies so high up under the ribs that it is very liable to be overlooked in bowel obstruction saw one case of bowel obstruction in which the operator examined almost every part of the gut except the splenic flexure. The abdomen was closed without discovering the real point of obstruction and at the autopsy a malignant growth was found occupying the splenic flexure. The entire colon is accessible to pressure by the hand except the hepatic and splenic flexures. The hepatic flexure lies under the liver while the splenic lies behind the stomach so high as the tenth rib where it is held by the costo-colic ligament. The transverse colon usually crosses the belly at a level with the umbilicus. In distension of the colon the first permanent enlargement will be in the sides. The colonic square will be apparent while the distention of the small intestines generally occurs in the center or toward the left side of the belly.

The ascending colon presents the most variation of any part of the colon. In normal adult life the ascending and descending colons are parallel with each other and placed vertical; while the direction, in general, of the transverse colon is horizontal. The colonic square does not assume definite relations until, say a year after birth; and the last part of the colon to adjust itself is the ascending colon. In our seventeen cases the ascending colon was recorded as having a mesentery in eight cases—nearly one-half—which is an error in records for the ascending colon seldom has a mesentery.

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It must be remembered that all the mesentery of the ascending colon is acquired. The ascending colon has passed across the abdomen, and then descended to its home in the right iliac fossa and right side of the abdomen. By the new adjustment of the ascending colon and by the shrinking of the liver, the ascending colon drags on the peritoneum and acquires a mesentery. In the goose and cow the ascending colon floats free in the abdominal cavity; it never acquires attachment like the human. In animals below man the ascending colon simply occupies a distended pouch of peritoneum. In one of the autopsies, we found almost a similar arrangement. The cecum was, as always, free; but the ascending colon was entirely covered with peritoneum for about four inches. This descending colon was so freely movable that it could be made to touch every organ in the body. Hence, appendicitis in this case could occur in any location in the abdomen. It was so loose that it would be liable to become diseased while out of the three great peritonitic regions—pelvis, right iliac fossa and gall-bladder regions. If peritonitis occurs in the peritoneum covering the small intestines it is dangerous as that part has not learned through the ages to resist infection by starting up peritonitis and burying the invader. One must not be too positive nor yet deceived in regard to the mesentery of the ascending colon as when it is very widely distended it shows no mesentery and several inches of the posterior wall of the ascending colon may be entirely bare of peritoneum. But if one will watch it collapse he will at once see that it has a distinct mesentery. Hence, in the same subject the ascending colon may at one time have a distinct mesentery and at another have no mesentery at all. Then, the contraction and distention of the ascending colon determines in many subjects whether it has a mesentery or not. My work in the autopsy room, the dissecting room and in abdominal surgery convinces me that the old surgeons who so often performed colotomy external to the peritoneum consciously or unconsciously frequently entered the peritoneal cavity. The chief utility in regard to the mesentery of the ascending colon lies with the cecum and appendix where we will discuss it.

In the seventeen cases the ascending colons showed variations

(*a*) In one case the cecum was arrested at the under surface of the liver. In this case the ilium entered it from behind and at the right side. The ascending colon was rotated one-half turn on itself.

(*b*) Eight of the seventeen cases had no mesentery—nearly one half—(an error in records).

(*c*) In seventeen cases the shortest was six inches and the longest nine inches—it varied three inches in length.

(*d*) The caliber of the ascending colon varied about the same as its length.

(*e*) The ascending colon has various degrees of descension in the human body. In some subjects of the seventeen it descended below the pelvic brim and in others to the pelvic brim, in others it descended to various points between liver and iliac fossa.

(*f*) By distending and emptying the ascending colon one can create or make its mesentery disappear in a goodly number of cases.

(*g*) There is a peculiar kind or bend in most ascending colons—perhaps due to the kidney as it generally occurs at the lower end of the kidney.

(*h*) The cases showed that if the cecum was arrested in its course, a loop of the adjacent ascending colon continued in its descent.

The descending colon shows a very different aspect than the ascending colon. In autopsies of two to four days it is generally small and contracted. The contraction is probably a stage or rigor mortis. It shows at various points such tight constrictions that I have seen physicians reporting such as strictures. The longest descending colon was nearly ten inches; the shortest seven inches and the average length in fourteen cases was eight inches. The mesentery of the descending colon represents the old mesentery of early fetal life. It has become slightly displaced to the left. It does not vary much. In seventeen cases, sixteen had a mesentery. Only one case in seventeen was marked with no mesentery. But in several cases as the descending colon approaches the psoas muscle it seems to lose its mesentery or at least to become very short. It is in the lower end of the descending colon that strictures are apt to arise. Rigor mortis seems to seize the descending colon with more vigor than any other portion, perhaps on account of the increase of connective and muscular tissue which the colon assumes toward its end. The autopsies showed the peritoneum surrounding the descending colon as lying on a considerable bed of connective tissue. This soft thick bed of snow-white tissue serves as a movable couch for the peritoneum to slide and glide over. It allows some mobility to the descending colon, but the ascending colon is much more movable in a larger number of cases. It must be remembered that fixation of the bowel at any point is liable to produce at least cicatricial strictures, if not malignant ones, from trauma. Wherever the mucous membrane is liable to injury, traumas, abrasion or lesion by the hard feces containing sharp, rough foreign bodies, there stricture or malignance is liable to arise. The chief strictures of the large bowel are in the descending colon. To the practitioner there are certain points in the colon of intense interest—they are landmarks around which disease arises, around which diagnosis is made. The autopsies showed exactly where disease is liable to arise and as probability is the rule of life, it is reasonable to look for disease in the living where autopsies indicate. The cecum and appendix are in a notorious locality for peritonitis. The next point of the colon in order of frequence are the sigmoid flexure, the splenic flexure, and finally, but least, the hepatic flexure.

If one carefully observes many autopsies it will soon be apparent that the cecum assumes a definite form. I have noted with some care the outline of about one

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hundred ceca and, as Treves suggests, four forms will cover all ceca. Figures 6, 7, 8 and 9 show the four

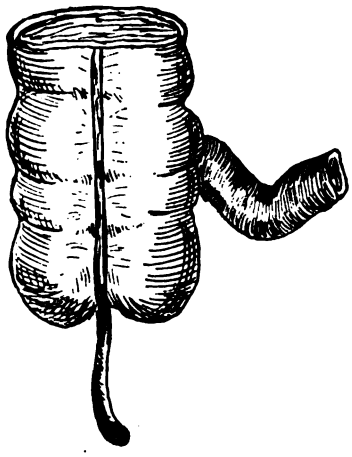

Fig 6.

A symmetrical caecum.

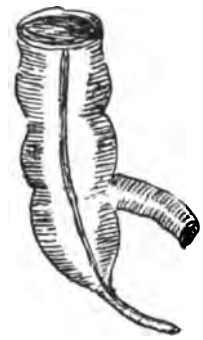

Fig. 7

Fetal type of caecum.

general shapes of the ceca found in the thirteen out of seventeen. The other four cases were not noted as to shape. Figure 6 represents a symmetrical cecum, *i. e.*, the bowel is placed symmetrical as regards the bands of the colon. It was fed equally on each side by the ileo-colic artery. Figure 7 represents a fetal type of cecum. It tapers like a dog's cecum and reminds one of an infantile shape. Figure 8 represents a rare form which

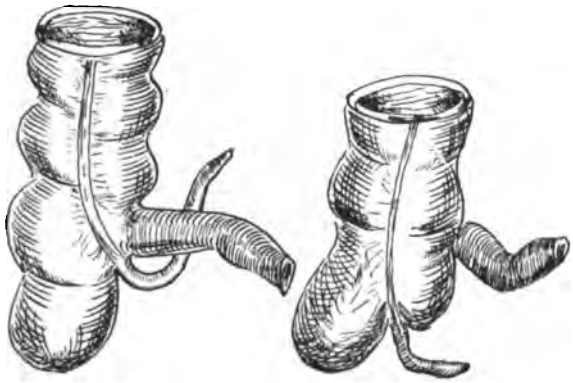

Fig. 8.

Atypical caecum.

Fig. 9

Non-symmetrical caecum, from case No 10.

might be termed atypical or atrophic and shows a very uneven blood supply to one side of the cecum by the ileo-colic artery. Figure 9 represents the most common form of ceca which we will term non-symmetrical. It shows that the ileo-colic artery had fed the external half of the cecum more than the internal half. In the seventeen cases every one of the figures (6, 7, 8, 9) had a typical representative.

I sketched the cecum on opening the abdomen in thirteen cases out of the seventeen and carefully noted its form and outline. Seven of the cases were of the non-symmetrical type, three were symmetrical, two were fetal and one was the atypical or atrophic type. The cecum is that portion of the ascending colon below the entrance of the ileum. In the seventeen cases it was all covered by peritoneum and in all other cases which I have examined (about one hundred in all). The cecum is no doubt the remnant of a once great stomach which represents all that is left after the shrinkage of the appendicular portion. *The cecum was not covered by omentum in one of the seventeen cases.* This is a significant fact, as in appendicitis it is common to find the omentum aiding the exudate to confine the infection which is endeavoring to invade the peritoneal cavity from the appendix. The explanation which I have endeavored to produce is the only one which seems reasonable, *i. e.*, as soon as infection begins to radiate from the appendix it paralyzes the bowel adjacent and produces a soft, sticky exudate. The still paralyzed bowel allows the edge of the omentum to be thrown on to it by means of peristalsis in surrounding bowel while the sticky, soft exudate fixes the omentum when once in contact with it. Hence the omentum in times of war (inflammation) hastens to parts of danger (infectious invasion) to destroy and bury the invader in exudates. The omentum and exudates really starve out the infectious enemy. Right here I wish to introduce a new view, or rather a new theory, in regard to two matters, but I think depending on the same kind of cause. The idea concerns inflammatory deposits around the cecum and under the point of the longest mesentery of the sigmoid. For a long time in autopsies I have observed old inflammatory deposits and bands around the cecum and quite distant from the appendix. The deposits seemed so far from the appendix and no adhesions existed between the appendix and the distinct deposits around the side of the cecum that I could not account for such adhesions on the ground of old appendicitis. Again, in many autopsies I found very extensive adhesions, bands and exudates under the sigmoid as it crosses the psoas muscle. I called attention to this point, for some time, through a series of autopsies, but no explanation was forthcoming. I have an original explanation to offer for these old adhesions existing so often around the cecum and under the sigmoid. The explanation consists in attributing the exudates to the irritation produced by the repeated contraction and relaxation of the psoas and iliac muscles. Old adhesions occur so frequently on the outer side of the cecum and under the sigmoid as it crosses the psoas that I feel that this gives a reasonable explanation of the process. It will be considered remarkable when I say that twelve of the seventeen cases showed old inflammation around the cecum and appendix. These observations were made with special care on account of the recently frequent use of the knife for so-called appendicitis. Our studies in the viscera, we think, show that inflammatory adhesions can occur around the cecum and not involve

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the appendix, that the moving psoas muscle can produce sufficient irritation to create an exudate and consequent adhesion. It will astonish many to say that we found seventy per cent of the old peritonitic adhesions around the cecum and appendix. The average measurement of the cecum in fourteen cases was nearly 2 x 2 x 2 inches. Occasionally there would be scarcely any cecum. It might extend less than an inch below the entrance of the ilium or it might extend over three inches below. When a cecum was very small it consisted of a fetal type. It looked like the dog's cecum. It simply shrank from the tip of the appendix gradually up to the entering ilium. The cecum is often very movable for in six cases out of seventeen the cecum could be drawn through the hernial orifice, *i. e.*, it was amply long enough to pass through the femoral and inguinal rings, if opportunity afforded. Four times out of seventeen the cecum hung in the pelvis and almost to the pelvic floor in each case. In four cases the cecum was so mobile that it could be made to touch almost every abdominal viscus. In all cases the cecum was entirely covered by peritoneum. In two cases the ascending meso-colon only extended to three inches above the entrance of the ilium, and in two cases to within two inches. This makes not only a free cecum, but it made a free ascending colon for two to three inches respectively. The peritoneum did not leave the ascending colon in such cases for two or three inches above the entering ilium. This would give in two cases a large bowel entirely free for more than five inches—almost exactly similar to the horses' and cows' cecum. Such anatomical data of freely movable ceca is valuable in surgical procedures as appendicitis may occur in widely variable districts. It is a notable fact when over one-third of ceca are sufficiently long and mobile to pass through inguinal and femoral rings. In regard to the position of the cecum, it generally lies on the psoas muscle. But it may lie in the pelvis as four of our seventeen cases did. When the cecum lies in the pelvis it is of course in contact with the bladder and rectum in man and in woman with the tubes as well. It is in contact with highly functionating pelvic organs and is in a dangerous place so far as acquiring inflammation is concerned. Nearly one quarter or twenty-five per cent of the ceca lie in the pelvis. Ceca lying in the pelvis are more dangerous in woman than in man. Now, many ceca lie on the upper border of the iliac muscle as well as partly on the psoas, but I carefully noted that six ceca out of seventeen lay directly to the right of the psoas muscle. In the seventeen cases four ceca lay in the pelvis and six lay to the right of the psoas muscle. This leaves seven which lay partly on the psoas and partly on the iliac muscle. The contraction and relaxation of these two muscles is what I believe produces the numerous adhesions around the cecum and under the sigmoid as it crosses the psoas muscle. The peritonitis in such cases may be mechanical or ceemical. In most cases the apex of the cecum corresponds with the middle point of Poupart's ligament.

I gave as average dimensions of the 17 ceca 2 x 2 x 2 inches, but the cecum is very irregular in size and outline so that one seldom finds a ceca with uniform dimensions. The description of the cecum in anatomical text books one can trace for generations as a kind of literary legacy. In the main it is correct. During the last six years I have carefully examined the viscera of several hundred bodies and I now feel quite certain that every one of the two hundred ceca were entirely covered by peritoneum. Treves found in one hundred examinations that the ceca were every one covered with peritoneum. This is an important anatomical fact for the application in the surgery in regard to the appendix.

If in my two hundred carefully examined cases and in Treves' one hundred cases the ceca were entirely covered with peritoneum it shows it to be quite a constant anatomical fact that the cecum is entirely covered by peritoneum. Again, if the cecum is entirely covered by peritoneum the appendix stands a more constant chance to be always covered by the same membrane. Therefore the appendix will necessarily rupture intra-peritoneally. However from careful examinations and discussions at autopsies I must admit that perhaps in one case in a hundred there is a possibility that the pus could burrow into the post-cecal cellular tissue of the iliac fossa between the layers of the mesenteriolum. Those surgeons who propose to reach the appendix extra-peritoneally possess erroneous anatomy, for it is an anatomical impossibility.

Another point of interest arose in the seventeen cases in regard to the cecum. I found in four cases that the cecal peritoneum did not reflect from the gut-wall at the entrance of the ilium, but in two cases it extended two inches up the posterior surface of the ascending colon and in two cases it extended three inches. This gave to the cecum a peculiar freedom—so free and mobile that the cecum fell into the pelvis and in most of the cases lay on the pelvic floor, besides such mobile ceca will herniate and touch every abdominal viscera. Some sixty years ago Albers, of Bonn, started the idea of typhilis or cecitis as the cause of the dangerous troubles which occur in the right iliac fossa. A Frenchman somewhat later, with keen insight, said such troubles belonged to the appendix and that (prophetically) we might some day surgically remove such difficulty. Both physicians were, in my opinion, correct, but the explanation which I offer in regard to the irritation of the psoas and iliac muscles seems to me to give a clew to both kinds of pathology—cecal and appendicular.

[TO BE CONTINUED.]

Monorrhagia.

℞ Fl. extr. ergot, - - - - - - fℨij.
Fl. extr. hydrast. canad., - - - - - fℨj.
Dioviburnia, - - - - - - - fℨiij.
Syrup. cinnam., - - - - - - fℨss.
M.
Sig. Teaspoonful three times a day.

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EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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The Publication of the Proceedings of the St. Louis Medical Society.

At its last meeting a resolution, introduced by Dr. LAidley, was adopted by the St. Louis Medical Society, providing for the publication of the proceedings of that body. There were two papers in the field. *The Journal of the American Medical Association* and the REVIEW. The Society had the good sense to see the necessity of quick publication, a thing which it would have been impossible to accomplish, should the Society have decided on *The Journal of the American Medical Association.* Besides being an act of justifiable patriotism, the step which the Soc ety has taken recommends itself as an act prompted by common sense. Its advantages are too obvious to be discussed at any length. The REVIEW sees in the resolution an indorsement of its policy pursued during the last year in regard to all matters affecting the Medical Society. It will try to give satisfaction to its friends and foes alike by prompt and reliable work.

One-Sided and Unsatisfactory Discussions in Medical Societies.

As is well known by this time, Dr. Hansemann, Virchow's first assistant, read several weeks ago a highly sensational article on the antitoxine treatment in the Berlin Medical Society. Aside from charging the remedy with dangerous effects, he made the assertion that its therapeutic value was far from being demonstrated and that the bacteriological diagnosis of diphtheria rested on extremely feeble foundations. At the same meeting he complained that on occasions like this one the bacteriologists made it a point to stay away from the meetings and that therefore it was impossible to tackle them on questions of bacteriological weaknesses and fallacies like the one pertaining to the diagnostic value of the Klebs Loeffler bacillus. The bacteriologists, he claimed, had refused to appear at the meetings, saying that the Berlin Medical Society was an improper place to discuss matters of this sort.

We do not know whether the reporters of the Berlin papers have invaded the sacred precincts of the Berlin Medical Society, or whether similar conditions to those existing in St. Louis prevail in Berlin. At all events there seems to exist a sort of a self constituted aristocracy in the medical circles of the German capital, and that the gentlemen composing this aristocracy have a too exalted opinion of themselves, to appear in such a democratic body, as the Berlin Medical Society seems to be.

***

We were prompted to make these remarks a propos one of the late meetings of the St. Louis Medical Society, at which Dr. Paquin read a paper, which ought to have called forth a discussion from the bacteriologists of St. Louis. We allude to Dr. Paquin's treatment of tuberculosis with the blood-serum of the horse. Serum therapy, of course, is the legitimate offspring of bacteriological investigations. It is difficult to imagine how it happened that all the recognized bacteriologists of St. Louis "and there exist a good many by this time," should have considered it the proper thing to stay away from the meeting on such an important occasion. Are they too aristocratic for a discussion of this kind, like their Berlin confreres? There is never a lack of discussion on any subject connected with surgory, but for some reason or other, papers like that of Dr. Paquin, which by its very nature is a specialistic one, does not find favor with, and seems to be ignored by, those who ought to come forward and help to enlighten the not initiated members of the Society on an intricate subject.

Peace to Its Ashes.

The *Deutsch-Amerikanische Medicinische Zeitung* has joined the ranks of the great majority! In ordinary language, it is dead—and dead as a door nail too—in conformity with our prognosis, which from the beginning of that journal was "unfavorable" and gradually deepened into "lethal." Several months ago we published a seclection of endearing names with which the *Zeitung* had honored the editor of this journal. It now

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appears that this was the result of a last, supreme, convulsive effort. It did not survive the shock. The *Zeitung* has not uttered a word since and nobody regrets like us its premature departure and its disappearance from our table as an ever running fountain of involuntary humor.—The *Zeitung* is dead.

MEDICAL SOCIETIES

St. Louis Obstetrical and Gynecological Society.

Regular Meeting, Thursday Evening, December 20, 1894. Dr. W. H. Ford, President, in the chair.

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The President's Address.

Dr. Ford, the President, said.—I must take occasion to express my thanks for the very unexpected honor that was conferred upon me at the last meeting, and it may not be out of place for me to make a few remarks regarding the present status of the Society and what it ought to accomplish. This Society has now been in existence for seventeen years, having been organized in 1877. It has been very distinctly a representative society in the matters which it is concerned with in St. Louis, and has been characterized by marked dignity and decorum ever since its formation. I do not recollect in the period of my membership, which dates from the inauguration of the Society, that a single member has been called to order for any personality in debate. The Society has been exceptionally free from personal or professional disagreements between its members, while its social gatherings have always been pleasant in the highest degree. A society of this kind must be regarded as effective or proposedly effective in two respects, one of which I may call "critical," and the other "originative." As regards the critical function of the Society, we find it to our advantage to criticize the opinions of members expressed during the meetings of the Society and also to express our approval or disapproval of the modes of practice and new theories which come to us from other parts of the world. A society like this is therefore expressly and distinctively critical. This is of great advantage, and has conduced greatly to the improvement of our members. By our mutual discussions we have been able to keep on a level with the current progress of medical science throughout the world, and I do not know of any society in the United States or elsewhere that is better informed than ours. I believe that we are fully posted as to what is going on at home and abroad, and fully able to criticize what is said or done, both outside of our gates and within them. This, however, is not all that we should aim at by any means. However important it may be to cultivate our judicial powers and to keep ourselves up to the level of what is just and proved, we should not limit ourselves entirely to mere imitation, even of the best precedents. It may perhaps be said that situated so far away from the great medical centers, and controlled by medical thought in other parts of the world, whether on the European continent or in the greater medical centers of the United States, we should content ourselves with an approval or disapproval of what has been done by men who may have had immense opportunities and experiences, and more right, perhaps to express themselves *ex cathedra*. But the time has come when we can not consent to be bound down by any such consideration, and that leads me to say with regard to the second point of usefulness in our Society, that we ought to endeavor to think and act with a good share of independent yet prudent originality. We should not be content to severally follow in the track which has been beaten by others before us; to take the teachings given us and to remain content therewith; we should insist on forming our own conclusions, and be certain to know what is going on in the world and then we should not only judge but act independently. Therefore I think that it is the duty of this Society to endeavor to advance the cause of medical science by as much original work as possible. Such work may consist either in the fortification, or delimitation of various matters already of interest to us for which there is the amplest opportunity, in general by the purer and better definition of matters which we know to be true; or else, perhaps, by good chance combined with logical labor, in the determination of new modes of thought or practice. We owe this to ourselves and to the Society. This Society represents the growth of St. Louis. It is in accord with the growth of the West, and of that part of the West over which St. Louis presides; we must consider the advance of this city, and what in the future it is bound to be. If our Society has has been the representative of St. Louis and of this section of the West in the past, what should it be in the future? We must endeavor to leave behind us proofs that our Society and its members are in line with the profession in other great medical center; we must leave a record which will reflect credit upon us. The Society will live after we have passed away and this is the heritage that we ought to leave to those who succeed us. We should therefore not only labor for our own advantage but for the benefit of the Society, and endeavor to maintain its reputation. In general, we should endeavor to obey the directions of a maxim of Morgagni's which is prefixed to one of the subdivisions of the *London Lancet*; the only way, says he, to advance medical knowledge is to collect histories or accounts of cases and of post-mortem dissections, and to compare them with each other. Of these we should, as Morgagni says, have as many as possible. I therefore hope that the Society in the coming year will endeavor not only to carefully note and report their cases at our meetings, and to criticise them fairly during our discussions, but likewise that our members will do so as frequently as possible, because extended experience

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is necessary for just conclusions. Thus we will have a more abundant supply of material, and more extended and varied discussions, and a larger mass of literary matter to preserve in our transactions for the coming year.

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PUS TUBES.

DR. FRANK GLASGOW.—Early this fall I made some remarks in regard to the treatment of pyosalpinx by the method advocated by Dr. Dorsett, viz., dilatation and medication of the uterine cavity and in cases curetting. I would like to report that since speaking of this subject, I have had a number of cases where there has been collection in the tubes, and with the exception of one case, all of the tubes have discharged. The patient in which there was no discharge I wish to say a few words about. It was the case of a woman who has been suffering for a long time; I believe the inception of the disease dated back three years, and although I could not get a good history of it, she probably had had a gonorrhea. The tubes were matted together, there was a large mass down in the cul-de sac and extending from side to side of the pelvis; the uterus was fixed. In that case I did not expect much, but I thought I would lose nothing and do no harm by trying, so I dilated with elm tents for a while, and then curetted. I was very careful not to pull the uterus down and not to move it, but she had a slight attack of peritonitis following it, as she had had many such attacks on any exertion. Some discharge came away, but she did not improve, so I performed a laparotomy upon her, and removed two enormous abscesses, both together being as large as my two fists, filling up almost the whole of the pelvis. One tube was so rotten that I could not put a ligature on it; my finger went right through close to the uterus, but there was not much hemorrhage. The tubes were distended, especially the one on the left, containing stinking pus and some of this got into the pelvis. The other was distended somewhat. In both ovaries there were large abscesses which I got out without rupturing; I aspirated one on the left drawing out about three ounces of pus; the right tube was not much distended apparently. It was a case where there was no possibility of curing except by removal and I thought that was the case when I started in with it. I told them I would try but I did not expect anything from it, but I believe one tube was partially emptied. That case was a little peculiar in this regard; the abdominal cut bled very profusely and I had to use quite a number of forceps. After making an incision through the skin and through the abdominal wall, there was pretty free hemorrhage. The hemorrhage was as profuse, if not more so, than any case I ever operated on and the woman had lost so much blood that I did not dare to trust the keeping of sponges in the pelvis but had to tampon the pelvis. I use Mickulitz's method, that is a large square piece of iodoform gauze, pushed down to the bottom of the cul-de-sac, then a strip of gauze packed into this. I packed four yards of gauze in until I got it up to the abdominal cut, so as to form a firm column down to the bottom of Douglas' cul-de-sac. As a good deal of this stinking pus had escaped into the pelvis, I was very much afraid there would be a peritonitis set up, but there was never a trace of peritonitis, and the temperature never went over 100.4. Vomiting commenced the next day and she was in a very critical condition; her pulse was very bad; I used hypodermics of brandy and strychnine, digitalis and nitro-glycerine, and got her through it, and then she went on in an interrupted recovery except that her vomiting continued through that day and the day after. The day after the operation I took out a good deal of the packing. I thought I had taken it all out and it was not until in giving a rectal injection that I found in the cul-de-sac a firm, hard mass—in the bottom of the cul-de sac—and took it out and it proved to be a piece of the packing. The mass of the intestines being so far from the bottom of the pelvis and uterus, etc I thought perhaps in coming down it would break through the adhesions and I might have trouble, but apparently everything was going to heal up completely; there was nothing but lymph around the cut, clear lymph all the way up and the gauze came out clean. But of course I put a tube in and after about eight days she had a rise of temperature. It went up to 101.4; then there was some foul pus coming up; but she got along very well and now there is almost no discharge and the woman is practically well. I put in through and through silver sutures and left them there, having fastened only one or two. After removing the gauze I fastened the other sutures without giving the patient morphine. A place was left for the tube. After this wound had all healed below and nearly closed up, I simply scraped all the granulation tissue for three quarters of an inch and brought the skin together and had a very neat cicatrix.

DR. FORD.—Were the stitches above or below?

DR. GLASGOW.—Part above and part below; the sutures being through and through, the parts were brought in contact leaving the skin open. The woman is all right, but it was one of the worst cases of pus tubes I have ever had. But this is the first case of pus tube that I have had for over a year where I have had to open the belly; in almost all cases the tubes discharge; and in almost all cases there is no return of the trouble, although in one case there has been a return. I treated the patient a year ago in November and reported it to the Society. There was a large mass on one side of the uterus; that all disappeared and the woman went along all right; I saw nothing of her during the winter, but in July or August I was called to see her, and she then had a severe dysentery and symptoms very much like what she had a year ago. I examined her and considered the most of her trouble was due to the dysentery and not uterus, but after that passed away I found there was a filling of the tube again, and she was suffering a good deal. I put her on the same treatment except that I did not use gauze but used slippery elm tents and in three or four days she was relieved and she has suffered

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very little pain since. The tube is now hardly to be felt; you can feel it high up as a little firm, hard enlargement.

Dr. Mudd.—Did you test the urine in the first case during the first five or six days while the packing was in there or within a day or two afterwards to see if there was any albumen present?

Dr. Glasgow.—No, sir; I did not.

Dr. Mudd.—How great do you make the distention of the uterus; how much do you dilate?

Dr. Glasgow.—Which case are you speaking of?

Dr Mudd.—Especially about this last case about the urine and in a general way as to the dilatation.

Dr. Glasgow.—I have been speaking of two different cases; the last one was entirely different from the other.

Dr. Mudd.—I refer to the one you operated on.

Dr. Glasgow.—The urine seemed to have been secreted all right; the pressure apparently did not obstruct the uterus or if so not to any extent that I could detect.

Dr. McPheeters.—Had she had any children?

Dr. Glasgow.—Yes; she had a child by a former husband; none by this one. In answer to Dr. Mudd's question as to the extent to which I dilated the uterus in these cases: In the last case that I spoke of I used at the most four slippery elm tents, good-sized ones. I never use an anesthetic. I commence with one, two or three and get up to four, but not more than that, and it caused considerable pain; but no anesthetic was needed at all and the discharge came away. In most cases I use two or three, sometimes four. I have gone above four; in one case I had seven in, but we can get good dilatation with four; we can get a finger in with six or seven. I do not use a steel dilator at all. In this case that I operated on I dilated and curetted without using a dilator at all and then packed with gauze afterwards. My opinion is that it is not so much the opening of the cavity of the uterus as to the direct pressure on the mucous membrane and the antiseptics applied to the mucous membrane, reducing the inflammation and swelling around the opening of the tubes; not as Dr. Dorsett thinks the direct extension of the cornua of the uterus; that can not occur from the use of slippery elm tents.

Dr. Ford.—Where there is a discharge from the tube there must necessarily be a chronic corporeal endometritis. Perhaps by the reduction of the thickness—the general hyperemic condition of the mucous membrane—much good may result. I have been very anxious to have Dr. Dorsett state how he introduces the packing at first; by what instrument the direct manipulative procedure is made and how the packing is introduced.

Dr. Dorsett.—I will say that I first use a small Peasley dilator, about the size of an ordinary uterine sound, having the patient under an anesthetic, in the left lateral position; then after I have dilated as far as I can with the Peasley dilator; I use a large two-prong dilator with the set screw on it, then I clean the uterus out—curette it—and then paint it with a strong solution of carbolic acid, 95 per cent; then swab it out again with absorbent cotton; then pack it with strips of iodoform gauze, using strips one inch wide torn or cut lengthwise with the fabric. In regard to the packing I have noticed this (and it answers the statement of Price, that you can never dilate the uterus enough so that the pus will come out of the tube), that when, for example, you take a uterus that is hard and firm, after you have packed it the first time, you can get twice as much gauze in when you pack it the second time, and when you pack it the third time you can get in three times as much gauze. I believe that Price says the reason that the pus will not be discharged is because the uterus is hard and firm and the opening is occluded; this is true at the beginning, but if you pack it two or three times the uterus becomes perfectly soft and dilatible. I believe any gynecologist who has had much to do with packing the uterus knows this is a fact. In regard to the case of Dr. Glasgow, in which he had to perform laparotomy, it reminds me of a case I had four weeks ago. A woman came into the office holding her hand to her abdomen, suffering excruciating pain, and she told me that she had been delivered by a physician who was under the influence of liquor, and who did not observe the rules that we observe in obstetrics as far as antiseptics are concerned; she had pyosalpinx, due to a piece of retained placenta. The pyosalpinx on the right side was very large, the distension had gone so far that it had invaded the supra-peritoneal cellular tissue—a rupture into this space having occurred, and it was pointing down into the vagina very near the entroitus, and it fluctuated on touching, and I felt as if I wanted to put a knife into it; but I told her she had better go to the hospital, which she did. I went out the next morning, but could not get the operating-room, so I had her bathed well and given an emena, and returned in the afternoon. I did not make a second examination, but put her under the influence of an anesthetic in the ward, and Dr. Brandt and myself carried her into the operating-room. She was rather a heavy woman; I had hold of her limbs and the thighs were simply flexed on the abdomen. We put her upon the table, and I put my finger into the vagina to feel for the abscess, and it was gone—I was somewhat puzzled. I called the nurses and asked them if there had been any discharge of pus by the rectum, vagina or bladder, they answered in the negative, so the only conclusion I could arrive at was that it had ruptured into the belly; so, after a little hesitation, we concluded to do a laparotomy, which we did, and the belly was found full of pus; it was up as far as the transverse colon; it pervaded everything, and I washed it out, in doing so I used fifteen gallons of water; then I began to look for the ovary, and I found it, a portion of the rectum and a portion of the small bowel together with a portion of the cul-de-sac of Douglas formed the abscess cavity. I then began to separate the adhesions, and I never have seen as much hemorrhage in a case in my life; it bled, and bled in spite of the Trendelenberg position, in which I placed her im-

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mediately. I could not find where the hemorrhage came from Of course it came from the separation of the adhesions, I supposed, but just where the point was I did not know. I used the Mickulitz dressing, packing it until the bleeding ceased. Of course I expected a case of peritonitis and death the next day, anyway, but I was surprised the next day to find the temperature 99.5, and the temperature never went above that until after the first week when, after the dressing was removed, it went to 100 and 102, but it gradually decreased, and the woman is now doing well. In this case I am of the opinion that the pus formed in the Fallopian tube midway between the uterus and the ovary, and that it ruptured into the sub-peritoneal pelvic space, and that possibly, by pressure, it ruptured secondarily into the general pelvic cavity; and, thirdly, when we flexed her thighs in carrying her to the operating-room the adhesions gave way and it ruptured into the general abdominal cavity; and, that when I saw it first it was in the sub-peritoneal pelvic space, the layer of the broad ligament forming its walls, and the peculiar position during the time I was bringing her into the operating-room, caused the rupture; at least there was a hole there into which I could stick my fist through into the posterior layer of the broad ligament. It was a very puzzling case, and a case that called for quick action on the part of the operator. I felt the responsibility very acutely, as I had not secured her permission to open her belly, but I did it and she was well satisfied with the result.

Dr. Glasgow.—What became of the sinus leading toward the vulva? The pus must have been of a very innocuous character, otherwise it seems to me that the sinus would have re-filled and caused trouble.

Dr. Dorsett.—As I stated, there was an opening through the posterior layer of the broad ligament that I could push my fist in, and it seemed to go away down into the sub peritoneal cavity. You understand the layers of the broad ligaments run over the Fallopian tube, and is like the roof of a United States soldier's tent. The layers of the broad ligament passing over the Fallopian tube are like the roof of a tent stretched over the ridge pole of the tent, the Fallopian tube acting as the ridge-pole.

Dr. Glasgow.—I am speaking of the sinus that came down along side of the vagina; you did not open that?

Dr. Dorsett.—You misunderstood me; I said nothing about a sinus in the vagina. I said it bulged into the vagina, it did not open there.

Dr. Glasgow.—The pus must have been of a very innocuous character; you could not have washed out the lowest portion of the sinus.

Dr. Dorsett.—I washed it out thoroughly, and swabbed it out with cotton.

Dr. Glasgow.—There is one thing in regard to these cases I would like to inquire about, and that is, if any of the gentlemen have seen a primary peritonitis following a laparotomy where there was a quantity of gauze packed in the pelvis. I have had some fearful cases where I expected peritonitis to result, and there have been none.

Dr. Mudd.—I was very much interested in the report of the first case of Dr. Glasgow, in which he used so much gauze. There are two points in the use of gauze that have been of interest to me. I have used large quantities of iodoform gauze in packing the pelvic cavity after such operations as the doctor described; generally without any disturbance from the use of the gauze. I have lost three cases of abdominal operations—three cases of appendicitis in which I packed the wounds and abscess cavity with gauze in which there followed no local peritoneal troubles, but in which there was an acute nephritis, the patient dying the third or fourth day. In these cases the urine was tested before the operation, tested during the sickness of the patient; and, in one case, it had been under observation for some time before the patient was attacked with the acute appendicitis, and in each one of these three cases there supervened very rapidly after the operation a suppression of the urine with large quantities of albumen in it. I have reason to believe that the iodoform had something to do with the development of the nephritis that followed it. Now, we must take into consideration the fact that there are a few patients who have strong idiosyncrasies for such a poison. I think the idiosyncrasy may be true of the peritoneal cavity that is true of the skin. I believe iodoform gauze packing is dangerous in that way in isolated instances. It has been a very great safeguard to me in my practice in dealing with these pus cases in the pelvis. I believe, however, that if I had to go over the work again, and that I shall in future, unless I see some good reason to change my views, use plain sterilized gauze in packing. I think, perhaps, we can be more sure of sterilizing the plain gauze than of the purity of the iodoform gauze; I believe it answers the purpose as well, and with less danger. The reason I asked Dr. Glasgow with reference to the condition of the urine in his case, was for the purpose of bringing out that one factor. I think one of the symptoms that we get from the iodoform disturbance of such wounds is in the depressed condition of the circulation. The rapid, feeble pulse evidences a very marked depression, and it is not unfrequently accompanied by delirium; that is, not the delirium of peritonitis, it is not the delirium that follows sometimes after shock of an operation, but it is a delirium that comes somewhat gradually; mild at first and afterwards becomes violent, a mania almost, and in all three of these cases there was more or less marked disturbance of mentality. With reference to the evacuation of the pus tubes by the uterus, I do not think there is any question about that occurring; I have noticed it before I was familiar with Dr. Dorsett's views about dilatation of the uterus, and I think it occurs very often by Nature's efforts. The thing that puzzled me in listening to Dr. Dorsett's cases of dilatation of the uterus and the result following it, was to account for the sim-

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ple packing with gauze having such an influence in opening the tubes. I do not think, mechanically considered, we can put gauze into the horn of the uterus in such a way as to accomplish, by mechanical force, the dilatation of the tube. I think it is more likely that it has the effect by diminishing the inflammation of the mucous surface, and thus permit the tube to discharge. We can dilate the neck of the uterus by sponge tents, and I have seen the neck dilated simply by a blood clot, when we pack the vagina with gauze, sponges or anything that stops the flow from the uterus. I have seen a blood clot form in the uterine neck and dilate it in a few hours; and I do not think there is any difficulty in the dilatation of the neck, but I do not see now we are going to pack up in the body of the uterus so as to mechanically dilate the tube through the uterus.

Dr. Dorsett.—You do not make a small opening. You dilate the uterus thoroughly, first.

Dr. Mudd.—You use a sponge tent?

Dr. Dorsett.—I do not use a sponge tent; I use a steel dilator; first a small one, and afterwards a larger one.

Dr. Mudd.—Still, it is not an easy matter to push the gauze up and get it into the fundus with sufficient force to dilate the horn.

Dr. Dorsett.—It is useless; it will pull back every-time. I use a whalebone applicator with a thin, flat end.

Dr. Mudd.—It appears from that, that the dilation of the neck is the chief element in the success of the case. It gives a free discharge to the contents of the uterus, and diminishes the engorgement of the parts, and has a good mechanical influence. I was interested in Dr. Dorsett's case, in which he spoke of the pushing down of the abscess toward the orifice of the vagina. His explanation of this case, I think, is the true one; he found an opening, extra peritoneally, in one of the broad ligaments. These cases are doubly interesting at this time because of the freedom with which all these cases have been subjected to laparotomy, and the reaction that has followed. I had an opportunity for a good many years under Dr. Hodgen to obseave the evacuation of pelvic abscesses, and I saw a good many cases of this kind get well without radical operation, and the practice of draining the abscesses through the cul de-sac and pelvic basin has never been abandoned. There are cases that will not yield to it—are not suited to this practice; and they must be subjected to laparotomy.

Dr. Glasgow.—In the three cases that you referred to, did you use a bichloride solution, or were the instruments put into a bichloride solution.

Dr. Mudd.—My habit is not to use a bichloride or carbolic acid solution; I use hot water, as a rule. I am satisfied that iodoform is occasionally an active element in the development of acute inflammation of the kidneys.

Dr. Dorsett.—There is one little point that might be brought out in regard to these evacuations of pus through the vagina and that is this, would it not be better to first evacuate the pus through the vagina in these cases in which it is possible to do so, and then do a laparotomy some other time, in those cases where laparotomy is necessary? We know that the argument generally used by men who do laparotomies too often is that when once the tube has been the site of an abscess the woman is constantly in danger of a recurrence of the abscess. Would it not be better therefore, if it is possible to do so, to remove the pus by the vagina, and then if at any time afterward it is necessary to make a laparotomy to do so? This point was impressed upon me very forcibly some time ago when I had a case that was not unlike the case delineated a while ago; the tube had been opened through the vagina believing that the tube had been crippled by electricity and by massage and by I don't know what else—a half-dozen things that had been used; believing it had been thoroughly crippled I thought I would make a laparotomy two or three weeks afterward, but that woman is perfectly well to-day. Then if you have to do the laparotomy you have a clean tube comparatively; at least one that does not contain pus. If we have to deal with a tube that is filled with large quantities of pus it is a serious matter and it is difficult to clean it out.

Dr. McPheeters.—In these cases where you have difficulty in dilating the uterus would you have recourse to an incision?

Dr. Dorsett.—I have never made an incision. I have always succeeded in dilating. As I said before the first time you dilate you do not get in much gauze, but when you come to dilate the second or third time you dilate to a much larger extent and get twice as much gauze in the uterus.

Dr. Boisliniere.—I would like to ask Dr. Mudd whether in the case in which he used the iodoform gauze and the urine was of a peculiar character, was there besides the albumen a musky character?

Dr. Mudd.—There was no blood in it; it was dark, heavy urine with albumen and casts; it was a pure nephritis as near as I could determine.

Dr. Glasgow.—I have seen two cases of iodoform poisoning.

Dr. Ford.—In these three cases where was the packing, was it by the side of the uterus?

Dr. Mudd.—These three cases I specially mentioned were cases of appendicitis and the packing was in the abdominal wound—in the general peritoneal cavity.

Dr. Ford.—The reason I asked was that I wanted to know whether it was possible that there was pressure exerted upon the uterus?

Dr. Mudd.—No, sir; I do not believe there was any compression of the uterus. The effect of that is well known and it takes but little pressure to affect the function of the kidney and it was probably impaired by the presence of the iodoform.

Dr. Gehrung.—How long did you leave Nicoli's dressing in?

Dr. Mudd.—About 24 or 36 hours.

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Dr. Gehrung.—In regard to the dilatability of the uterus which has been mentioned here, I would say that in former years, before the dilatation of the cervix was practiced for the purpose of curetting the womb, it was done without previous dilatation, and we frequently found that as soon as the curette was introduced into the womb, as soon as a few gouges were made the womb became paralyzed and distended gradually and we would in some cases be enabled to introduce the finger without previous artificial dilation. It shows that if the uterus is attacked severely in any way more or less dilatation will take place; this is seen in miscarriages and labors. I never practiced dilatation by tents, but have always done it by means of the metallic dilator; in many cases the uterus is sufficiently dilated so that we do not have to use the small dilaters at all, we can at once put in a pretty good sized dilator and dilate it sufficiently. Then when the uterus is paralyzed and the uterine speculum inserted, just to keep the cervix open and the internal os free from friction, you can easily pack through this with a small curved solid or tuburlar instrument which latter is a slightly bent tube that catches the gauze easily. You can carry it up and pack it carefully, and in withdrawing it, it does not pull it back; and thus make a very good packing. Then as Dr. Dorsett says when you pack the second or third time it is much easier, as the cervix is generally completely patulous—so far as the question proposed by Dr. Dorsett about puncturing the abscess below, is concerned, if it is of easy access, I am in favor of doing so. But I think it is not always best. I curetted the womb of a lady who came from a neighboring city for a pus tube—just an ordinary pus tube, and had apparently a good success by curetting. The lady remained in the hospital for about two weeks beyond the necessary time, so as not to expose herself too soon. Two or three weeks later I was called in consultation by her family physicians and found her suffering with peritonitis. She was so far gone that there was no hope in trying a laparotomy or anything else, since she died during that night. Though it is true she lived in a malarial neighborhood and used cistern water not of the best character, and it was supposed by the local physicians that the trouble started by malaria, I have some misgivings whether there may not have been a refilling and possibly rupture of the abscess; and it is possible that the life of this patient might have been saved if a laparotomy had been done in the first place. The question has been asked whether in our experience the Mickulitz (?) dressing has done any damage. In my hands it has never done so, and I have been more than surprised at the wonderful results obtained in bad cases despite or by means of this dressing. In several cases I have been obliged to use it to stop the otherwise incontrollable bleeding. In one case I made use of enormous quantities of gauze, and on removing the gauze there was a little oozing, but no harm resulted; on the other hand it seemed to have stimulated the tissues to rapid granulation. Of course it might stimulate them too much and cause adhesions though I have never seen this result. In one case where I removed the dressing after 48 hours, I found the gauze as solidly adherent as if it had been part of the tissue and thoroughly penetrated by granulations, and I had to use some force to remove the gauze. Then a temperary hemorrhage, a teaspoonful or so of blood, the filling up of the cavity, and closing of the wound progressed with wonderful rapidity. After the great amount of work that had to be done in this case before the dressing was applied and the large amount of gauze that was required in the packing, I was surprised at the result, not a bad symptom following it even after this forcible separation of the gauze.

Dr. Ford —I would like to remark that five or six years ago, in a paper read before the General Congress which met in Washington, Veuillet, of Geneva, described a method of dilating the uterus by means of packing or stuffing on successive occasions. The frequency of the procedure was governed by the reaction induced. This was done by Veuillet, for diagnoses, for uterine endoscopy, and not with a view to treatment except so far as facilitated by the dilatation. Two years ago we had this matter of packing suggested in cases of chronic endometritis, by Polk, of New York, and from that time to this, I have had cases which I treated in this way. In one case of a young girl from Illinois, the chronic endometritis seems to have been the result of a suppression of the menses, occurring when she was 16 years old (she is now 22), she has been more or less indisposed every since. My first case two years ago treated by packing was one of chronic corporeal endometritis, due to an old laceration of the cervix; the tubes were perfectly healthy. I first treated the interior of the womb, for a period of sixty to ninety days, when the interior of the womb seemed to be free from disease, I made a tracheolorrhaphy. The case did uncommouly well. A year afterwards she told me that she never had been so well for twenty-five years. The matter of dilating the uterus is one that is apt to give us a good deal of trouble. I do not believe we can always work with the steel dilator alone to advantage. In certain cases the contractility of the cervix is so great, that it is almost impossible to introduce enough gauze. In such cases, I begin the treatment by using antiseptic tents, of course with the caution necessary whenever we make use of a tent. After the first expansion, dilators are useful enough.

Dr Gehrung.—I can easily understand the advantage of using a tube or speculum through which to pack. If the cervix is sufficiently dilated you can carry the tube up to the very fundus, if you please, so there will be no scratching of the uterine wall even if that were objectionable, and then you can carry the gauze through the tube, to the very cornu and begin the packing there, and then gradually fill the uterine cavity, withdrawing the speculum in proportion as you fill the cavity. In this way there can be no injury done to the cervix.

Dr. Ford.—The objection to the Wiley's speculum is

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that you have to pack through the tube, and it is difficult to retain the packing in place.

Dr. Gehrung.—You hold the handle with one hand and pack in that way.

Dr. Papin.—It seems to me very strange that any gynecologist should tax his ingenuity to invent an instrument to pack the womb, when we have an instrument which is so much better and which can be used with dilating as a preliminary step, and with a facility which is marvelous. You can with Sims' applicator, which is nothing but a probe with a spiral wire at either end, the probe transfixed in this spiral wire three or four inches. This is passed through the gauze at the end of it, twisting it around carefully letting the end of it come out. This instrument is so satisfactory that I do not see the necessity for inventing another.

Dr. Dorsett.—I do not understand where the reason for the objection as to the scraping of the uterus comes in since we are in the habit of curetting it.

Dr. Mudd.—Is it good practice when you have a tubal abscess?

Dr. Dorsett.—Yes, sir.

Dr. Mudd.—I do not believe it.

Dr Dorsett.—I believe if we have an endometrium that is diseased, and by scraping the endometrium we can reduce the tumefaction, it is good practice; and we are much more apt to get good drainage.

Dr. Glasgow.—Why do you object to scraping the endometrium in case of pus tubes, Dr. Mudd?

Dr. Mudd.—If you currette the endometrium in those cases you open a new channel for infection. The idea in curetting is to get rid of some noxious granulations. Now it seems to me that in the cases of these pus tubes, and pelvic abscesses there are often latent inflammatory foci, which may be aroused to activity by such a stimulant. Often times the trouble in the endometrium causes pus tubes; and it is right to curette, but to curette when dealing with an unhealed abscess is generally wrong. Many of these processes instead of being acute are chronic, and if there is an abscess of the tube or in the neighborhood of the tube, perhaps in the peritoneal cavity, it may remain for months inactive. I remember very well a woman who came to me nearly a year ago, in which the uterus and roof of the vagina was a hard, compact mass. I opened an abscess and she got very much better After a little while she got into trouble again, I tapped it and drained it through the vagina. But during this process there were some other points that became tender, and complications developed until finally a laparotomy was resorted to, and the patient's death followed. It was a very interesting case in this that I found chronic, thick walled abscesses, in and about the uterus, some of them in the substance of the uterus, in the walls, some in the broad ligament, some in the intra peritoneal tissue around it and in the tubes. Some of them had been opened in the operation; some I did not discover until the post mortem gave me the opportunity. Such cases would have been injured by the use of the curette.

Dr. Glasgow.—Did you curette in that case?

Dr. Mudd.—No. sir.

Dr. Schwarz.—I have nothing to say, although I feel somewhat like Dr. Papin. A great many things astonish me. I am surprised at the frequency of pyo salpinx. I should like to have Dr. Dorsett give his reasons for considering the first case one of pyo-salpinx; that of retained placenta. You said the pyo-salpinx was caused by the retention of a piece of placenta.

Dr. Dorsett.—No, that was a different case.

Dr. Schwarz.—It was a case of pelvic abscess.

Dr. Dorsett.—I said it was due to a piece of retained placenta; that set up the pyo-salpinx.

Dr. Schwarz.—What evidence was there that it was a case of pyo-salpinx. Did you find a rupture of the tube?

Dr. Dorsett.—Yes, sir; I found the ruptured tube and I found an opening running into the subperitoneal space.

Dr. Schwarz.—I was astonished at the diagnosis in that case. I should have considered the case as one of pelvic cellulitis, or peritonitis; at least I should expect to have pelvic cellulitis or peritonitis following the retention of the placenta, and pelvic abscess following the cellulitis.

Dr Dorsett.—I mentioned the piece of retained placenta as being the cause of the trouble, giving the history.

Dr. Schwarz—I misunderstood you. It was certainly a very exceptional case where a septic infection after child birth causes pyo-salpinx. Usually the result expected is pelvic cellulitis or peritonitis, with possibly an abscess following. The next thing is, that I am ashamed to say I have been curetting very much—I am ashamed to say how much I do curette; sometimes I think I am nothing but a curetter and womb swabber. I brought a set of dilators from abroad 11 years ago—Hegar's dilators, and with these and the uterine sound I can dilate and pack the uterus very well, as well as with anything I have come across. I always dilate sufficiently to introduce the thickest kind of packing I should choose to put in, and I must tell Dr. Mudd that I have curetted in a good number of cases of pyo salpinx, and I think it is advisable in such cases to dilate the uterus and get as free a discharge as possible. I certainly would not curette where there was any inflammation of the uterus or its adnexa. If there is tenderness on pressure, I would not curette; but if there is no active inflammation of the parts, I think it is good treatment.

Bilious Vertigo.

℞ Pulv. jalapæ, - - - - - - - gr.xij.
Hydrarg. chlorat. mit., - - - - gr.iij.
Potass. sulphat.. - - - - - - gr.vij.

M. f. chart No. 1.

Sig. Take at bed time.

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ABSTRACTS

MEDICINE.

Treatment of Croupous Pneumonia.—Percy Kidd contributes an article on this subject to the *Practitioner*, in which he first calls attention to an interesting paper contributed to the *Brit. Med. Journ.* in 1891. Dr. Wilks recalled attention to the value of opium in several diseases in which it has been commonly said to be contraindicated. There are, perhaps, few diseases in which opium does better service than in pneumonia when judiciously employed. Some writers have recommended the use of the drug in the early stages of the disease to quite the patient, relieve pain, give him sleep, and husband his strength for the period of the crisis. Others have used the same remedy in the later stages to counteract the exhausting effect of delirium and insomnia. The only definite contraidication to the use of opium appears to us to be furnished by symptoms of impending exhaustion of the respiratory center,—shallow, labored respiration, drowsiness, and a tendency to cyanosis. Opium is certainly not a drug to prescribe in a routine way, though it is not denied that excellent results may be adduced in favor of such a practice. Owing to the marked tendency to recovery manifested by pneumonia, it is confessedly very difficult to gauge the results of rival methods of treatment. In no disease is it more important to treat each case on its own merits.

The chief indications for giving opium, with the reservation just mentioned, seem to be these: severe pain that cannon be controlled by other measures, insomnia, restlessness, and delirium. It is not, of course, claimed that every case manifesting these symptoms should be treated with opium; at the same time such symptoms may be often effectually and safely treated by opium at any stage of the disease.

Opium was given in one considerable dose at bedtime, either in the form of Dover's powder (10 grains) or a hypodermic injection of morphine ($^1/_6$ to $\frac{1}{4}$ grain). In one group of cases, Dover's powder was given every night from the time that the patient came under observation until the crisis. In another class the same drug was given for the first three or four nights, and was discontinued after its good effects had been manifested. Lastly, in a third class, morphine was injected once or more for the relief of some particular symptom. It does not appear that any marked difference was noted in the results derived from the several methods of administration. It seems best, on the whole, to restrict the use of opium to the relief of definite symptoms, and then to give one fair-sized dose, followed, if necessary, by a second.

Mr. Elsmore's notes show that the number of respirations was generally reduced by ten or twelve in the minute, the pulse being either unaffected or exhibiting a very transitory reduction in the number of beats. No marked effect on the expectoration could be traced. In one fatal case, associated with severe alcoholic delirium, opium had little or no effect, though injections of hyoscine ($^1/_{100}$ grain) gave temporary relief. But in another case of delirium tremens, which ultimately succumbed, morphine for many nights gave the patient six or seven hours' sleep, without exercising any prejudicial effect. In this patient death occurred on the twenty-fourth day, and was shown by the autopsy to be due to an independent pyemic process. In several severe cases of duble pneumonia with delirium and insomnia, the free use of morphine appeared to save life.

The writer has used strychine for some years, since reading a paper by Dr. Herbert Habershon, published in "St. Bartholomew's Hospital Report" for 1886, in which he narrated a series of cases of cardiac failure treated by strychnine. His list included, in addition, two cases of double pneumonia. In this paper Dr. Habershon insisted very rightly on the importance of giving strychnine by hypodermic injection, on occount of the imperfect and slow absorption from the stomach in severe disease. Dr. Habershon also expressed the opinion that the efficacy of strychnine is due to it action being exerted on the excito-motor never apparatus of the heart and on the respiratory center; for, as he points out, strychnine often succeeds when other remedies like alcohol and ether have failed, the effect of these being largely directed to the muscular fibres of the heart and to the arterioles. The action of strychnine brings indirect support to the view already expressed, that in pneumonia what we have to fear is the influence of toxines on the nervous system. On this hypothesis cardiac failure is really only an expression of exhaustion of the nerve centers, and is therefore an indirect effect of the poison.

The drug was employed mainly in the tabloid form $^1/_{60}$ grain being dissolved in four or five minims of water and injected subcutaneously or directly into the gluteal muscles. The latter method is to be preferred, as it appears to cause less pain. The indications for the use of strychnine are manily derived from the pulse. If the tension begins to sink, or if the frequency of the beats be much increased, strychnine should at once be tried. If the respiratory movements also become less vigorous, an additional reason is afforded for the use of the drug. The action of strychnine in increasing the tension and size of the pulse, as well as the vigor of the respiratory movements, is often manifested in ten or fifteen minutes. When the rally is not maintained, $^1/_{60}$ grain may be injected every two hours until three or four doses have been given, the injections being afterwards continued at longer intervals, once or twice in twenty-four hours, until the pluse and respiration right themselves. Indications for persisting with the strychnine must be mainly sought in a carful consideration of the pulse. If the heart seems to answer to

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the injections, they should be persevered with at intervals for at least twelve to twenty-four hours, until the danger is averted. If no definite result is produced on the pulse, the treatment must be suspended. In one severe case of double pneumonia, with great restlessness and irregularity of the pulse a few hours before the crisis, injections of strychnine produced an excellent result, the pulse became more regular, and the patient passed safely through the crisis. In another case, in a young man with wild delirium (apparently not alcoholic), which had resisted large doses of chloral and bromide of potassium, strychnine seemed to quite him and improve his pulse, the patient making a good recovery. Delirium has been regarded by many authors as an indication for alcoholic stimulation. In some cases, at least, injections of strychnine are more satisfactory, the effect being produced probably in an indirect manner through its action on the cardiac and respirator centers.

SURGERY.

Experimental Typhoid Fever.—Dr. Joseph Sanarelli contributed to a recent number of the *Annales de l' Institut Pasteur*, two interesting papers giving the results of studies upon experimental typhoid fever conducted by him in Metchnikoff's Laboratory of the Pasteur Institute, Paris, the conculsions of which we briefly summarize as follows:

1. The bacillus of Eberth produces in the body a very active toxic substance, which causes death by collapse through its effect upon the nervous system.

2. In addition to its general toxic effects, the typhoid toxine has a special and very energetic action upon the mucous membranes, particularly that of the small intestine, producing violent venous congestion, extensive infiltrations, hypertrophy of Peyer's patches, acute edema of the epithelium, complete detachment of the intestinal epithelieum, inflammation, hemorrhage and ulceration, which may affect any portion of the alimentary canal, but occur especially in the small intestine.

3. These anatomical lesions of the alimentary canal which occur under the influence of the typhoid toxine and independently of the presence of the specific microbe, are accompanied by objective phenomena which present the closest analogy to the symptoms of ordinary typhoid fever.

4. In experimental typhoid fever, as in human typhoid, the bacillus of Eberth is not ordinarily found in the intestinal contents, a confimation of the theory that the intestinal lesions observed in this malady are exclusively of toxic origin, and wholly disproving the old idea, according to which typhoid fever was considered as a process of infectious origin localized in the intestine.

5. The absence of the bacilli of Eberth from the intestine of man or animals may be explained as follows:

a. Typhoid fever is only an infection of the lymphatic system; it is in the lymphatic system that the virus localizes itself by preference exclusively, and multiplies and manufactures its poison.

b. Under the influence of this poison upon the intestinal walls, producing the grave anatomical and functional changes already described, the bacillus coli of the intestine becomes pathogenic, multiplies with extraordinary rapidity, and tends to destroy all the other species of microbes which are ordinarily found in the intestine.

6. The grave anatomical lesions of the intestinal mucous membrane, due to the typhoid toxine and the enormous development of the bacillus coli which occurs under its influence, constitute the first causes of the secondary infectious and local manifestations of the disease due to to the bacillus coli so frequent and well known in both human and experimental typhoid.

7. Animals vaccinated against the typhoid bacillus are also immune against bacterium coli, which then begin to disappear from the intestine where it is normally found, being destroyed by the epithelial cells which behave toward them as do other phagocytosic cells in a vaccinated organism.—*Modern Medicine.*

The Resistance of Typhoid Bacilli to Drying, and their Transmission by Air.—Uffelmann (*Centralbl. f. Bakt.*) has investigated these points. Various materials, mentioned below, were impregnated generally after sterilization, with water and both containing typhoid bacilli and subsequently kept at 14° to 16° F. in the shade. Nutrient gelatine was then inoculated with small portions of the material at varing periods after impregnation of the latter, and in due course was examined for the bacilli. The experiments showed that these organisms resist drying and retain their power of development:

1. In garden earth, twenty one days.
2. In white filter sand, eighty-two days.
3. In sweeepings from house and street, over thirty days.
4. On linen, sixty to seventy-two days.
5. On buckskin, eighty to eighty five days.
6. On wood, thirty-two days.

In a moister atmosphere it is probable that the duration of life of the bacilli would be longer. Uffelmann's experiments further establish that typhoid bacilli are carried into the air with dust from the street, the floor and clothing, and are thus able to infect food stuff, such as milk. The experiments, in fact, prove that these organisms are transmitted in the air. In the demonstration of typhoid bacilli the author employs the following criteria:

a. The appearance of the colonies under X 100.

b. The shape and mobility of the organisms (in each case comparison with typical colonies and organisms).

c. The behavior in 2 per cent lactose gelatine (no fermentation).

d. The effect produced on milk (no clotting).

e. The mode of growth on methyl-violet gelatine.

Instead of citric acid the author now uses carbolic

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acid, O 1 c. cm. to 100 c. cm. of the nutrient gelatine.—*Modern Medicine.*

NOTES AND ITEMS

Tours of Duty in the Army Medical Service.—The following circular was issued, Jan. 9, 1895, from the office of the Surgeon General of the Army:

The tour of duty for medical officers below the rank of Major at the following stations will hereafter be two years, which time will be considered as equivalent to a full tour of duty in the Military Department in which the several stations are located.

This, however, must not be considered an absolute rule, as the interests of the service may frequently call for a change of station within the department or to another department before the regular tour of duty has expired, and circumstances may sometimes make it advisable to extend the tour of duty of a medical officer beyond the time specified.

Alcatraz Island, Cal.	Fort Myer. Va.
Fort Brown, Texas.	Fort Porter, N. Y.
Columbus Barracks, O.	Fort Ringgold, Texas.
Fort Columbus, N. Y.	San Carlos, Ariz.
Fort DuChesne, Utah.	Fort Thomas, Ky.
Eagle Pass, Texas.	Fort Trumbull, Conn.
Fort Hamilton, N. Y.	Fort Wadsworth, N. Y.
Fort Hancock, Texas.	Fort Warren, Mass.
Fort Mason, Cal.	Washington Barracks, D.C.
Fort McIntosh, Texas.	Washington, D.C.
Camp Merritt, Mont.	Fort Wayne, Mich.

G. M. STERNBERG, Surgeon-General U. S. Army.

Approved:

DANIEL S. LAMONT, Secretary of War.

Outside of the announcement by Surgeon-General Sternberg in 1893, that those captains of the Medical Department who were nearing their examination for promotion would be assigned for a year as attending surgeons in certain cities, to afford them facilities for study and professional improvement, the circular just issued is the first formal intimation given to Army medical officers of the probable length of their tour of duty at any specified station. Since the close of the civil war, it has generally been understood that the Surgeon-General in assigning officers to duty considered the locality and character of their previous service. A tour of duty in the West has usually been followed by an assignment to an Eastern post; service in the field or at an isolated post by service at some military station near a city where the refinements of civilization with opportunities for professional culture might be enjoyed. The length of the tour at one post or in one department was four years, except for junior officers whose service in the East was limited to two years at a time. The circular just issued modifies this by restricting the two years term to twenty-two stations, among which are included the best of Eastern and the worst of the Western posts. Instead of moving the junior officers from all the Eastern stations, after two years service those only will be moved who have enjoyed the advantages presented by the vicinity of large cities; and instead of having a four years tour for all the Western posts, the young officer who has endured the discomforts of such places as San Carlos and the Texas posts, will be relieved at the end of the two years term of service. By this arrangement the number of moves and consequent expense of transportation will be lessened, and the advantages of the good stations and the disadvantages of the bad ones will be more equably distributed than by method previously in force.

Sanitary Climatology.—The Weather Bureau of the Department of Agriculture recently issued a circular which substantially reads as follows: The interest manifested by every class of people in the subject of climate and its influence on health and disease has determined the Secretary of Agriculture, through the medium of the Weather Bureau, to undertake the systematic investigation of the subject. It is hoped to make the proposed investigation of interest and value to all, but especially to medical and sanitary professions and to the large number of persons who seek, by visiting health resorts and seeking a change of climate, either to regain health or prolong lives incurably affected or to ward off threatened disease. The study of the climate of the country in connection with the indigenous diseases should be of material service to every community, in showing to what degree local climatic peculiarities may favor or combat the development of the different diseases and by suggesting in many instances supplementary sanitary precautions, also by indicating to what parts of the country invalids and health seekers may be sent to find climatic surroundings best adapted to the alleviation or cure of their particular cases. The hearty co operation of the various boards of health, of public sanitary authorities, of sanitary associations and societies, and of physicians who may feel an interest in the work is asked to acheive and perfect the aims of of this investigation. No compensation can be offered for this co operation other than to send, free of cost, the publications of the bureau bearing upon climatology and its relation to health and diseases to all those who assist in the work. Co operation will consist in sending to the office reports of vital statistice from the various localities. That these reports may be of value, it is evident that they should be accurate and complete and be rendered promptly and regularly. Blank forms of reports have been prepared so as to occasion as little trouble and labor as possible on the part of the reporter, and will be furnished by the bureau on application. At the very begining of the investigation it is not possible to outline precisely the channels through which the results obtained will be made public, but it is hoped to publish soon a periodical devoted

to climatology and its relations to health and disease. The publication will probably resemble in size and general appearance the present *Monthly Weather Review*, the subject matter being, of course, different. More detailed information will be furnished on application to Mark W. Harrington, chief of the bureau, Washington, D. C.

A Triumph of Orificial Surgery.—An orificial surgeon reports in a recent number of a medical journal a case of "phthisis" cured by the operation for laceration of the cervix. The patient had a severe and long-continued cough and hectic fever, and what the surgeon calls an "interstitial inflammation of the lungs," with infiltration and obstruction of the air cells. "On the day of the operation the temperature reached 97 6°, and never rose above 99° afterward." Some light is thrown upon the nature of the case by the surgeon's stating that it was a case of phthisis of neurotic origin, and that such cases are often successfully treated by "removing the distal point of pathology." Other successful results of "orificial surgery" are a case in which chronic eczema of the hand was cured by stretching the rectum, and another case of the same disease cured by loosening the "hood" of the clitoris and "clipping of irritated points at the various outlet of the body." Of course all the resources of therepeutic art had been exhausted upon these cases before they came under the care of the "orificial surgeon." A more tansparent from of quackery than some of this orificial surgery can hardely be imagined. The author of the article referred to above states that in his observation "many cases of insanity are made worst by the operative procedure, but the secondary effect is most satisfactory." In his opinion, "a conservative orificial surgeon should be connected with each of our State hospitals for the insane." This last idea seems an excellent one, if he be connected in the proper capacity—that is, as a patient rather than as a sugeon.—Boston *Med. and Surg. Journ.*.

Prophylaxis of Tuberculosis.—In the *Maladies du Soldat*, Professor Marvaud details the prophylactic measures employed in the French army against the spread of tuberculosis. These consist of:

1. The immediate discharge from service of all men affected with tuberculosis or likely to become so, such as those having weakly constitutions, vicious conformation of the chest, insufficient respiratory capacity, or hereditary tendency.

2. The prompt discharge of all who become affected during service.

3. Preventive hygienic measures; location of barracks away from towns and on elevated and well ventilated sites; thorough ventilation of squad-rooms and day-rooms for the use of soldiers in inclement weather, antiseptics in spittoons and paraffined floors to prevent soiling with sputa, the disuse for a certain period of any squad room in which cases have been developed, isolation wards, disinfection, attention to diet, the avoidance of sudden transitions from heat to cold, and the use of such exercises in the open air as tend to expand the chest. As the death rate from phthisis is 150 per cent greater in the army than in the civil population of corresponding sex and age these prophylactic measures are of prime importance.—*Jour. Am. Med. Ass'n.*

An Academy of Medicine in Washington, D. C.—A society of this name was formed at a meeting held on December 10. After much discussion it was decided that it would not be successful if the Academy met in rented quarters, so the only plan which suggested itself as feasible was to procure from thirty doctors $300 each, in $100 yearly payments, with which the building suitable for the purpose was to be purchased and furnished. Many meetings looking to an organization were held, and all but one or two of the requisite number of subscribers secured; a constitution was adopted, and all seemed well until the advent of summer, when the enthusiasm died out and the matter was dropped. The meeting held December 10, was for the purpose of endeavoring to rescue the Academy, and as the other efforts had failed it was decided to raise only sufficient funds to rent a suitable hall and to furnish it. Temporary officers were elected until January 1 as follows:

President—Dr. T. L. McDermott.
Vice-President—Dr. F. C. Simpson.
Secretary—Dr. J. L. Howard.
Treasurer—Dr. J. M. Ray.

A commodious hall has been rented in the Columbia Building, on the sixth floor; it will soon be furnished, and it is to be hoped that the profession at large will take an active interest in the movement.

The Parts that Do Not Grow Old.—In his work on the senile heart Dr. Balfour tells us that there are two parts of the human organism which, if wisely used "largely escape senile failure." These two are the brain and the heart. Persons who think have often wondered why brain workers, great statesmen, and others, should continue to work with almost unimpaired mental activity and energy up to a period when most of the organs and functions of the body are in a condition of advanced senile decay. There is a physiological reason for this, and Dr. Balfour tells us what it is. The normal brain, he affirms, "remains vigorous to the last," and that "because its nutrition is especially provided for." About middle life or a little later, the general arteries of the body begin to lose their elasticity and to slowly but surely dilate. They become, therefore, much less efficient carriers of the nutrient blood to the capillary areas. But this is not the case with the internal carotids, which supply the cappillary areas of the brain. On the contrary, those large vessels "continue to retain their pristine elasticity, so that the blood-pressure remains normally higher than within the capillary area of any other organ in the body. The cerebral blood-paths

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being thus kept open, the brain tissue is kept better nourished than the other tissues of the body." Who is there among those who have reached or passed middle age that will not be rejoiced to find such admirable physiological warrant for the belief that the brain may continue to work, and even to improve, almost to the very last hour of life?—*Medical Record.*

Anatomy an Art.—Dr. Robert Fletcher discussed the relation of these subjects in an able and interesting way in his annual address as President of the Philosophical Society of Washington D. C., December 12, last. Every paragraph of his essay, now published in pamphlet form, scintillates with notes, suggestions, references and anecdotes drawn from the history of art. Taste in art is not inherent in man; its culture requires long study, close observation and familiarty with the best masters. By its brief review of the work of these masters, Dr. Fletcher's address will do much for the cultivation of artistic taste in those who give it the attention which it merits. His conclusion, that an acquiantance with muscular anatomy by dissection, though to be recommended as useful, forms but a comparatively unimportant part of artistic anatomy, is fully borne out by the consideration that, "The noble works of Phidias and his contemporaries or successors were in existence long before the time when Hippocrates began the work of rescuing medicine from the priest and made a first imperfect sketch of anatomy."

Bacteria in School Rooms.—In a recent communication to the Hamburg Medical Society, M. Ruete details the results of his bacteriologic examination of the air of school rooms. He made use of Hueppe's method and made his investigations at 2:30 in the afternoons. While these were always made under the same conditions the results were very variable. He found a minimum of 1,500 bacteria to the cubic meter, a maximum of 3,000,000 and a mean of 268,000 Analogous researches gave Hesse an average of only 9,500. Among the bacteria observed the author calls attention (*Bulletin Medical de Paris*) to a motile bacillus which does not develop on agar, but on gelatin plaques gives rise to circular colonies with crenated edges; it can also be cultivated on milk and potato; pure cultures kill mice in twenty-four hours and their blood is rapidly fatal to guinea-pigs. Ruete has been able to extract toxins from the blood of animals thus killed.—*Jour. Amer. Med. Ass'n.*

Ready Method of Bacteriological Examination.—Penrose has suggested the following ready method of making a bacteriological examination during an abdominal section. In cases in which it is important to know whether or not fluids with which the abdominal cavity has been soiled are infectious, a cover glass specimen may be fixed with the flame of a spirit lamp, and then stained with marble fuchsine and examined at once.—*Modern Medicine.*

Treatment of Chloroform Asphyxia.—At a recent seance of the Paris Academy of Medicine, reported in the "Bulletin of the Academy," Labbe said that in apparent death, from chloroform, he was firmly convinced that artificial respiration should be persevered in for a long time and instanced many cases in support of this advice particularly one in which he had kept up artificial respiration for twenty seven minutes and was finally rewarded with a remarkable success. Lately, however, he had used rhythmical traction of the tongue, suggested by M. Laborde, in the case of a child who, soon after beginning the chloroform inhalation, became asphyxiated. Death seemed absolute, the pupils were dialated to the utmost. As soon however as he began the rhythmical traction of the tongue the patient returned to life with marvelous rapidity; it was a genuine resurrection He believes this method is preferable to artificial resipration, as it is easier and much quicker Professor Verneuil said that for some time he had used only lingual traction alternating with flagellation of the epigastrium with a wet towel.

Salophen in Rheumatic Affections.—Rheumatism is not as rare an affection in childhood as is commonly believed. There can be no doubt many cases of so called growing pains are actually of rheumatic origin, and can be readily relieved by the use of anti-rheumatic remedies. The majority of our anti-rheumatics, however, possess certain objectionable features which contraindicate or at any rate greatly restrict their use in pediatric practice. They tend to upset the delicate digestion of the child and are unwillingly taken on account of their repugnant taste. They are apt to produce nervous phenomena, such as vertigo, ringing in the ears, headache, and above all, they have a debilitating effect upon the heart and circulation. These properties belong especially to the salicylates which hitherto have represented our most effective anti rheumatics. Since its introduction into therapeutics about three years ago, salophen which is a non poisonous derivative of salicylic acid has been constantly gaining ground as a substitute for the salicylates and has been shown to possess features which render it an ideal remedy in the treatment of rheumatism in childhood. It is tasteless and therefore readily administered, does not irritate the stomach, or disturb the digestion, and while fully as effective as salicylic acid and preparations is absolutely devoid of disagreeable and injurious effects upon the heart and nervous system. Recently Dr. Brown, of Hamburg, has called attention to the value of salophen in rheumatic affections in children. His results in a large number of cases having been of the most gratifying character. The dose of salophen for children varies from 0.3 to 0.5 gm. every two or three hours, the drug being given dry on the tongue followed by a swallow of water. In muscular rheumatism, tonsillitis and migraine, salophen is also a promising addition to the materia medica of childhood.

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ORIGINAL ARTICLES

Observations on the Abdominal Viscera in Seventeen Autopsies.

BY BYRON ROBINSON, CHICAGO,

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[CONTINUED].

We now come to the appendix which has had no small attention by many the past five years. It behooves us to look with care on this little functionless fading organ. Only man and the higher apes have an appendix. Dr. Gouley reports the examination of the appendix of a chimpanzee weighing one hundred and forty-five pounds. He noted that its blind gut measured fourteen and one-half inches long. Briggs, of New York, once removed a blind intestine measuring nine and one-half inches long. There is no doubt that the appendix is a dangerous organ of the atrophic type and that it occupies one of the three great peritonitic regions. The horse and cow have a great large blind gut which will hold gallons and it swings free in the abdominal cavity. The appendix is very irregular in position and dimension. As it atrophies the growing cecum steals away the peritoneum that forms its mesenteriolum so that it is dragged and tugged and squeezed for the benefit of surrounding organs. I measured the length of the appendix in sixteen cases. The average length was exactly four inches. The shortest appendix was one and one-half inches. Outside of these post-mortems, I saw in an adult male an appendix seven and one half inches long. Eleven out of seventeen cases showed distinct old adhesions from peritonitis. There was a twelfth doubtful case of old peritonitic adhesion around the appendix so that in careful examinations of seventeen adult bodies 70 per cent showed inflammation. In seventeen cases four appendices hung in the pelvis and one hung just over the brim. Two of the cases in which the appendix hung in the pelvis were male and two female. Nearly 25 per cent of the appendices hung in the pelvis. Over 25 per cent of the appendices of women hung in the pelvis. The mesentery of the appendix was observed in twelve cases out of the seventeen. Ten out of the twelve had a full mesenteriolum and two had half a mesenteriolum, the appendix originally always had a mesentery. In nine cases the direction toward which the appendix pointed was observed. In four cases it pointed toward the spleen, in two cases toward the liver and in one case toward the middle of the lateral pelvic wall, in one case toward the middle of the iliac crest and in one case toward the iliac spine. In the majority of cases the appendix points toward the spleen. The position of the appendix was noted in twelve cases. It lay behind the cecum in four cases. In lay across the psoas muscle five times and two of the five lay parallel across the psoas to the entering ilium. It lay to the right of the psoas muscle in three cases. Various fossa exist around the appendix and cecum, generally known as ileo cecal. None are constant in size and in the seventeen cases none were constant in existence. The most constant fossa is what is mostly known as the subcecal-fossa and it appears to be joined by a fold of peritoneum held prominent by the ileo-colic artery as it crosses the anterior surface of the cecum. One will not always be certain that any single ileo-cecal fossa exists except by construction.

To sum up the chief points in regard to ceco-appendicular structure we note that it lies in a well marked peritonitic district, that the cecum had four well marked types, that doubtless many adhesions around the cecum come from irritation of the psoas and iliac muscles (as well as a similar point under the sigmoid). We learn that the position of the cecum depends on its degree of descent. The cecum is always entirely covered with peritoneum.

In women autopsies teach that the cecum and appendix lay in the pelvis about 30 per cent and in man about 20 per cent. The cecum and appendix lying in the pelvis in contact with the uterus, tubes, ovaries, bladder and rectum becomes much more dangerous than if it be home in the right iliac fossa If they lie in the pelvis they become entangled in the inflammations of the urinary and genital organs. We must look for the position of ceco appendicular structure according to its development. It must be remembered that in the rotation of the intestinal loops the cecum gradually passes transversely across the abdomen to the liver where it descends to its home in the right iliac fossa; in some 25 to 30 per cent it descends still further into the pelvis from

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simply extensive prolapse of the viscera, as I have frequently found in old people, especially old women. A curious feature in the development and descent of the cecum is that when it is arrested in its downward course between the liver and pelvis the cecum and ascending colon makes a partial rotation on itself. This makes the ilium pass behind the ascending colon and enter it from the right. Dr. Waite and myself operated on a case of appendicitis where the ceco-appendicular structure lay under the liver and the ilium passed behind and entered the cecum from the right. However it makes no difference where the cecum is we can always find the appendix by following the longitudinal muscular bands to the root of the appendix. The cecum has a very wide variation of development, varying in size from four inches long and three inches in diameter to almost a remnant. The same can be said of the appendix as we have found it seven and one-half inches long and having the exact appearance of a gut and again atrophied to about one inch long with the thickness of a lead-pencil. The great mobility of the cecum and appendix in about one-quarter of cases should always put one on guard in diagnosis. A mobile cecum can leave the three great peritonitic districts, pelvic, appendicular and gall bladder region and create a violent and dangerous inflammation in districts unused to resist infection. Besides a mobile cecum can herniate through the inguinal and femoral rings of both sides.

Fig. 10

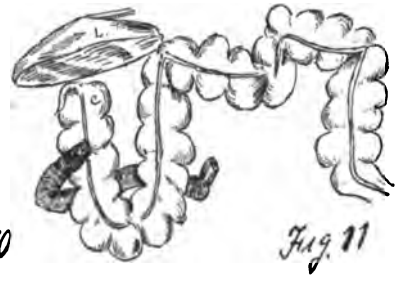
Fig. 11

The ending of the ilium is of considerable surgical significance as any anomalous condition of the lower end of the ilium indicates anomalous relations in adjacent structures. Generally the ilium ends by entering the large bowel in an upward direction. It enters the descending colon just above the pelvic brim. But all these conditions may be changed. In the seventeen bodies we found that the ilium sometimes entered the colon while in the pelvis, at other times it approached the colon from behind and entered it from the right.

The ilium entered the ascending colon at any point on the circumference of a half circle extending around the posterior half of the bowel. When the ilium enters the colon from the pelvis the ileo-colic structure is generally prolapsed, *i. e.*, its supports are elongated. As illustration of the ending of the ilium see Figures 10 and 11. If the ilium does not end in the usual manner it generally ends in some stage of volvulus or twisting. The mesentery of the ileo-cecal structure in some manner becomes elongated and then appears some yet unexplained force at work which makes the cecum rotate from right to left. The ilium ends around the hinder surface of the colon. So far I have only seen a twist or volvulus of three-fourths of a twist. It must be remembered that the elongated, fatless supports tend toward volvulus. In practical experimental work on dogs' viscera I never could produce a volvulus except by suturing the twisted viscus in position and even with sutures the volvulus had such a tendency to recover that it would tear out the sutures and return. Now, 60 per cent of volvulus occurs at the sigmoid flexure, 30 per cent at the cecum and 10 per cent in the small intestines. It is a little difficult to explain this volvulus or twisting of the ilium and cecum, but the vigorous peristalsis of the ilium, the fixity of the colon and the entrance of the ilium into the posterior half of the colon probably explains why the cecum rotates from right to the left. I have found in an adult autopsy the cecum and ilium twisted around each other (volvulus) three-fourths of a twist and both lying on the floor of the pelvis. The volvulus appeared insufficient to produce fecal obstruction. In some of the autopsies the ilium for one-half to two inches was found adherent to the cecum; however, was not pathologic but drawn against the cecum through the readjustment of peritoneum. However, the last part of the ilium is nearly always drawn against the cecum and not against the ascending colon. The mesenteriolum or mesentery of the appendix is of considerable interest as it frequently by its condition determines where the appendix will lie. The appendix originally always had a mesentery but on account of the rapid atrophy of the lower end of the cecum in man and apes and also owing to the rapid increase of the size of the cecum the atrophying lower colon is readjusted to the growing cecum; in other words, the fast widening cecum steals away the appendicular mesentery and appropriates it to its own expanding condition. Now, the mesenteriolum is stolen away irregularly and also the cecum grows irregularly, hence as the mesenteriolum leaves the appendix irregularly at irregular points the appendix becomes twisted on itself or laid against the posterior surface of the cecum. In a general way the growing cecum draws the peritoneum from the atrophying appendix sufficiently systematic to give the appendix chiefly a spiral form. The appendix may be said in general that it has a bent spiral outline. I examined twelve of the seventeen cases with especial reference to the mesenteriolum and ten cases were found with a full mesentery to the appendix and two cases with a mesentery extending one-half the distance from the root to the end of the appendix, in other words having half a mesenteriolum. The other five cases I did not examine with special reference to this subject and in this investigation of the proposed one hundred cases I only want to use what was definitely measured, observed and recorded in the viscera. It does not appear that the length of the appendix has anything to do with its spirality or bends, for the longest mesenteriolum (seven and one-half inches) was as straight as a gut

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while it is well known that a short, stubby appendix is generally quite straight. In only one subject in seventeen—an adult male—was a part of the appendix, the middle portion, practically obliterated. There are two common positions of the appendix. One is where the appendix lies just behind the entering ilium and points toward the spleen. The other common position is where the appendix point lies immediately behind the cecum and points toward the liver. The appendix assumes strange positions occasionally. One appendix six inches long lay just under the liver. In another case the appendix reached to the middle of the sacral vertebræ and lay just under the brim of the pelvis. A leakage of this appendix would infect the small bowels which would be very fatal. In still another case of the seventeen autopsies a five-inch appendix lay in the pel vis. It was practically obliterated in the middle half and finally its end pointed toward the middle of the lateral pelvic wall (female). The appendicular mesentery comes off from the lower layer of the mesentery of the lower end of the ilium. The line of origin of the mesenteriolum varies, but it generally arises from a short distance from the ilium and almost parallel to it. By putting the appendix on a stretch the mesentery will appear triangular and show its origin along the ilium.

The next piece of bowel in order is the sigmoid flexure which begins at the lower colon and ends at the point where the meso-rectum ceases. In other words the sigmoid begins at the outer border of the psoas and ends at the third sacral vertebræ. This method, as Treves suggests, is the best and simplest way to consider the sigmoid. In making the sigmoid reach to the point where the old so-called meso-rectum ceased we strike out the so called first piece of the rectum. In fact I have long noted in the dissecting-room that the old division of the rectum and sigmoid is artificial and not practical. The colonic bands run down to the third piece of sacrum with appendicæ epploicæ. I carefully measured the length of the sigmoid in thirteen out of seventeen cases. The longest sigmoid was twenty four inches and the shortest eight inches. The average length was about sixteen inches. I measured the length of the mesentery from the psoas-muscle to the longest bend of the sigmoid loop in five cases of the seventeen. The longest mesentery was ten inches and the shortest measured was three inches. The average length of the sigmoid mesentery was seven inches for the five cases. The reason the other twelve cases were not used is because they were not actually and accurately recorded. Adhesions just under the sigmoid as it crossed the psoas-muscle were twelve times observed in the seven teen cases, and recorded. This means that twelve adult cadavers out of seventeen had distinctly marked old peritonitic adhesions over the psoas-muscle where the sigmoid crossed it. The only method of accounting for such numerous adhesions is by attributing it to the irritation of the psoas and iliac muscles. In the seventeen cases there were two sigmoid fossa in the mesentery of the sigmoid. The fossæ measured in each case 3x3 inches and was about two inches deep. I am convinced it is produced by the division of the sigmoid artery at its first arch. The mesentery of the fossa is thin and few blood vessels of any considerable size can be seen running across the fossa. Its danger is hernia from thinning of its wall and allowing a loop of gut to pass through and it became strangulated. Similar thin spots in the mesentery may be observed frequently at the lower end of the ilium due to the peculiar division of the ileo-colic artery. Dr. Waite and myself carefully performed autopsies on infants and we found the sigmoid enormously long for a small body. In one case in an infant we found a volvulus of the sigmoid and it lay over in the right iliac fossa. This large sigmoid in infants accounts for the suggestion of a French surgeon to perform colotomy on the right side in infants. If the pelvic organs are not distended the sigmoid with a long mesentery lies in the pelvis. The sigmoid is in close contact with the small bowels which lie in the pelvis and it is generally hidden by the loops of small intestines. The four organs that generally fill the pelvis are the bladder, rectum, uterus and sigmoid. The distention of any one of these organs will displace the rest. The meso-colon of the sigmoid begins at the outer border of the psoas and passes directly across it near or at the bifurcation of the iliac vessels. The course of the root of the sigmoid mesentery is then directly downward into the pelvis. The height of the sigmoid mesentery from the psoas to the highest point of the loop is in seven cases five inches. I think this is greater than it should be in many cases as no doubt the long sigmoid mesentery called my attention to measure it. Several times in the seventeen cases there was no mesentery over the psoas but the gut was in contact with the muscle. I did not notice in cases where the sigmoid was adherent to the psoas muscle, that there were more or less peritonitic adhesions than where there existed a long mesentery. It may be noted that as the cecum must be considered as the great landmark for surgical localization after opening the abdomen, so the sigmoid may be considered a minor landmark for the surgeon to take his bearings. In women the great surgical localizing point in the abdomen is the uterus. Sixty per cent of volvulus occurs in the sigmoid and a large part of the strictures of the bowel. In general the cecum and appendix, the hepatic, splenic and sigmoid flexures and the rectum are the points in the large bowel where disease is apt to arise. The large bowel must be looked upon as a receptacle which fills and empties periodically. Its diseases are chiefly malignant and non malignant, strictures and chronic inflammations. Its nerve and blood supply is not so great as the small bowel. Its diseases do not create such violent disturbances as those of the small bowel. It is arranged in a (colonic) square and injuries are not so dangerous as those of the small bowel—the small intestines in the business part of a man's digestive tract.

It is the real physiological laboratory of assimilation. It has a large and complicated nerve, blood and lymph

supply and a vast glandular apparatus. Its muscular coat is large and its function is high and active. One of the first peculiar features about the small bowel is its great variability of length. In nineteen cases I measured the length of the bowel in eight cases. The longest small intestine was twenty nine feet and the shortest thirteen feet. The average was twenty two feet. These were all adults. It can be seen from the above that the small intestine varies in length no less than sixteen feet. That is, the small bowel varies more than half its length. The explanation of this strange phenomenon must be sought for at the time of most active growth of the bowel. It has been shown from autopsies on children that after birth the small intestines grow at the rate of some two feet a month for three or four months (Treves). The measurements that Dr. Waite and myself took on infants' intestines showed that the small bowel shortly after birth is about ten feet long. Treves gives as the result of his measurements of infants at full term nine and one-half feet. Now, if the intestines grow at the rate of two feet a month we would have at the end of three months some fifteen feet of small bowel. After four or five months the bowel begins to grow more slowly. Hence the time of active physiological growth of the small gut is in the first six months of infant life. Supposing that some inflammation arises or some disease steps in to check the assimilation, will not the growing bowel suffer and be stunted or checked in its growth? Many infants have diarrhea in the first months of life. Nutrition is profoundly disturbed. It seems to me that it is at this early time of the first few months of infant life that determines the peculiar short bowel found occasionally in some subjects. However, a bowel of fifteen feet is not very uncommon. The weight, age and height did not bear any relation to the length of the small bowel. In the eight subjects we measured we carefully measured six cases in regard to the length of the mesentery from the back to the gut. The longest mesentery was ten inches and the shortest was five inches. The average length of the mesentery in six cases was eight inches. But it must be remembered that the cases which were measured were more than ordinary length. For I made extensive measurements of the mesentery while occupying the chair of anatomy in the Toledo Medical College and the average measurement of the mesentery was six inches. Treves gives eight inches and Gray gives four inches as the average length of the mesentery. If we average these three results, viz., $6x4x9=19\div3=6\frac{1}{3}$ inches which is a very good average for the length of the mesentery from the back-bone to the gut. The root of the mesentery averages about six inches, that is measuring from the end of the duodenum to the entrance of the ilium. A special feature in the seventeen cases was to test whether any loops of intestines could be drawn through the hernial orifices artificially produced for that purpose. In other words, could the loops of the small intestines be drawn beyond the pelvic brim in front. It may be distinctly stated that in sixteen out of seventeen cases loops of intestines could be drawn through the hernial orifices. So that elongation of the mesentery of the small intestines is not the chief cause of hernia. Treves makes the assertion that a normal body will not allow intestinal loops to be drawn through the hernial orifices as their mesentery is not long enough. Our investigation has raised doubt in my mind as to the correctness of Treves' statement. Our cases were adult autopsies taken just as they came with no picking. Another feature is the great amount of prolapse of viscera found in adult autopsies. My notes mark six cases with distinct prolapse in seventeen cases. Over one-third had visceral prolapse with elongated visceral supports. Will not visceral prolapse account for much dragging pain in many women?

[TO BE CONTINUED.]

Exfoliation of the Cochlea, Vestibule and Semi-Circular Canals, Presentation of the Patient and Specimen.

BY M A GOLDSTEIN, M D., ST. LOUIS.

Read before the St. Louis Medical Society, Jan. 5, 1895.

In the history of otology, reports of cases of exfoliation of the labyrinthian structures have always created more than a passing interest, on account of their rarity of occurrence, the importance of their recognition, and the value of the many clinical phenomena observed in the course of so extensive a necrotic process in the delicate structure of the temporal bone.

Caries and exfoliation of the cochlea alone, as a sequestrum separate from the rest of the labyrinth, has been observed and described comparatively frequent. From the interesting bibliography on the subject may be mentioned a comprehensive report by Bezold, of Munich; in a monograph published in 1886 are collected perhaps the richest statistics of necrosis of the labyrinth coming under the notice of an individual observer. In the clinical observations in a series of forty-six (46) cases, he summarizes the principal factors bearing on the subject, as follows:

Necrosis of the labyrinth occurs in the male with twice the frequency that it does in the female; children under ten (10) years of age are especially predisposed to this affection (18 cases in 43); the acute exanthemata, especially scarlet fever, play an important role as causative factors in the long continued suppurative otitis, with its frequent tendency to involvement of the internal ear; the necrosis usually follows in the wake of a suppurative otitis of long standing; in two (2) cases only necrosis occurred after an otitis of eight months duration; in twenty-one (21) cases the otitis was of four years standing; in eight (8) cases, of twenty years; only one case is cited where the necrosis of the labrynth is described as the primary, and the otitis as the secondary process; the exfoliation and elimination of the sequestra

occurred in 37 of 46 cases cited during the course of the disease; in nine (9) cases death ensued before the elimination of the sequestrum. Larger sequestra, composed not only of the cochlea, but also of the vestibule, semicircular canals and pars acusticus internus have been met with but rarely. Such cases have been cited and described in detail by: Wilde ("Treatise on Disease of the Ear," 1854, p. 358); Shaw ("Transaction Pathological Society," London, Vol. VII.); Toynbee (*Arch. f. Ohrenh.*, 1864, Bd. I.); Agnew (*Amer. Med. Times*, vol. 8, p. 183, see Troeltsch, 1869, 2d Am. ed.); Voltolini (*Monatschr. f. Ohrenh.*, 1870, No. 6); Pomeroy ("Trans. Amer. Otol Soc," 1872); Blake ("Trans. Amer. Otol. Soc.," 1880, vol. 2, p. 417); Pollak (*Archives of Otology*, 1881, vol. 10, p 361); Sexton (*Illustrat. Quart. of Med. and Surg.*, N. Y., January, 1882). In the other cases, with the exception of those of Pomeroy and Pollak, the large sequestra were removed through the external auditory meatus. In the case reported by Pomeroy, the large sequestrum was exfoliated by a natural process of elimination from the opening of a sinus behind the auricle. In Pollak's case, the necrotic process had advanced to such a degree that the sequestrum, the major portion of the temporal bone, was lifted out of position and removed with scarcely the application of an instrument other than the fingers. Each of the cases recorded was attended by a very marked facial paralysis, great disturbance of gait and equilibrium, and complete deafness on the affected side.

The case herewith described, with the presentation of the patient and specimen, may, perhaps, in consideration of the size of the sequestra, the beauty and thorough preservation of the pathological specimen, and the numerous clinical phenomen recorded, deserve a recognition with the rarest cases of the labyrinth as yet reported.

Hally Muse, colored; male, aged 6½ years, born in Nashville, Tenn. Mother states patient was one of four healthy children; has always been well nourished and of average strength and activity. At the age of three years (December, 1891), patient contracted measles, making a smooth recovery without any of the frequent aural complications. One year later (November, 1892), an intense, acute earache, of several days' duration, ensued, followed by a copious purulent discharge; for eighteen months the discharge continued freely, uninterruptedly, without the accompaniment of any unfavorable symptom, the patient not even experiencing the slightest pain or difficulty in hearing. May 1, 1894, applied at the ear clinic of the Missouri Medical College Dispensary, where he received his first regular treatment for six weeks. During the following month patient absented himself from the clinic.

July 17, patient was admitted to the Ear Department of the Missouri Medical Polyclinic. His general condition and the suppurative process had now assumed a decidedly unfavorable aspect. The discharge had stopped, due to a plugging of the entire external auditory meatus with a cheesy mass, which, on examination, proved to be composed of partially dried and inspissated pus, epithelial shreds and detritus, emanating a thoroughly fetid and offensive odor. The entire posterior auricular region was very sensitive to slightest pressure, the auricle was assuming a position at right angles to the side of the head; the surface of the skin presented a sudden and irregular appearance; there was considerable induration, with distinct points of fluctuation, especially above a circumscribed area in a line with the upper margin of the auricle. This was incised and drained of about one and one-half ounces of green, fetid pus. The tension being hereby relieved, the patient has not complained of pain since. A marked and almost complete facial paralysis was demonstrable on the affected side. A small sinus, from which a spicula of bone had been recently discharged, was present, situated one-half inch posterior to the insertion line of the auricle, and in a line with the posterior border of the lobule. Such was the condition existing and I took charge of the case August 3.

August 5, the patient was prepared for operation. In the presence of Drs. Lippmann, Wolffner, Muetze, Neville, Kinner and Carrol, I made a long, free incision, connecting the upper, posterior-auricular abscess opening with the orifice of the sinus described. Hemorrhage and oozing was profuse and difficult to control, owing to the disorganized condition which the tissues in the field of operation had assumed by the long continuation of a severe necrotic process. At first pressure by broad retractors was applied, and a free opening to the bone made. Placing my curette in position, preparatory to the removal of the necrotic bone mass, I found a serious state of things existing. The entire area was one rotten mass, and could have been more easily ladled out with a spoon than removed with a curette. After considerable manipulation with curette, forceps and irrigator, I succeeded in exposing to view a sinus, leading downwards and forwards, with a depth of nearly two inches and diameters varying from one-half to one inch. The parts were thoroughly irrigated with hydrarg. bichlor. (1:1000) which was in itself a difficult task, under the circumstances, as a communication had been established through free exposure of the Eustachian tube between the ear and naso pharynx, and there was considerable danger of asphyxia and accidental complications while the patient was under chloroform. The wound was well dusted with iodoform, packed with bichloride gauze, and a well-padded compression applied. One hour later the little patient was up and walking part of the way home.

The following day I removed the first dressing. The discharge was profuse and the odor excessively fetid. The irrigation with warm 1:1000 bichloride was applied with a twelve ounce, hard-rubber, large-tipped syringe. The patient swallowed a considerable portion of the cleansing portion. The communication between the large posterior opening and the auditory canal was free and drainage clear. The cleansing and dressing of the wound caused the patient no discomfort, beyond that of

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the fluid entering the nasal and pharyngeal cavities during irrigation. The advantage of such an irrigation, in which the wound, the ear, nose and pharynx were simultaneously cleansed, is self-evident. It was noticed after the second dressing that the motor paralysis of the right eye had partially subsided, and that the patient was now able to close his eyes within one quarter inch of complete closure. The dressings were re-applied daily for three months with but slight change in the general appearance of the wound or patient. Throughout the entire course of treatment, since the operation, there has been absolutely no pain, tinnitus aurnum, vertigo, nausea and vomiting, or febrile reaction.

About the first week in November a change was noted in the general condition of the patient. He became restless, peevish, and complained of a general feeling of lassitude with a constant drowsiness. The clinical memoranda appended will show the most interesting factors in the development of the case.

November 5. On redressing the wound, noticed for the first time a necrotic mass of bone, black in color, rough in surface appearance and touch, projecting from the anterior-lateral wall of the posterior auricular sinus. Discharge profuse and intensely fetid.

November 6. On irrigation, numerous soft, long, discolored shreds were washed away. Discharge in twenty-four hours amounting to half an ounce of viscid, greenish, foul smelling pus.

November 7. The black necrotic mass appeared nearer the surface of the sinus orifice. When touched with the tip of the irrigating syringe, it was found to yield slightly. With a strong shanked, milled-pointed dissecting forceps the mass was firmly grasped, the head of the patient steadied, and by gentle steady traction, the entire sequestrum was painlessly removed, *through the fistulous opening*. Not the slightest hemorrhage ensued, even oozing being scarcely perceptible. The entire proceeding was borne by the patient without the least expression of pain or a single unfavorable symptom. The wound was slightly packed with iodoform gauze and the auditory canal cleansed and dried. Sound tests were then instituted, as hereinafter described.

November 8. The discharge diminished to one-third the quantity, issuing only from the auditory canal. The posterior wound, through which sequestrum had been removed, was clean, the gauze strip being removed almost dry and without stain. Inspection reveals the walls smoothly lined with numerous soft granulations. The fetor has disappeared. Drainage is free and clear. Antiseptic irrigation used throughout the treatment, of hydrarg. bichlor., 1:2000 and 2% acid carbolic, in luke warm aqueous solution. Walking and standing tests for equilibrium were madde. Results detailed later.

November 9. The discharge remains odorless; quantity unchanged; general condition much improved.

November 11. Patient has again assumed his former lively disposition; eats heartily; sleeps soundly; rarely offers a complaint, even of slightest discomfort. Perceptible decrease in the quantity of discharge.

November 12. On daily inspection by special illumination, after thorough irrigation, detected a flat oblong sequestrum at distal end of long sinus, and gently removed same with small angular forceps. Removal painless and without the slightest sequence. In the depth of this wound canal a pulsating or oscillating fluid, seemingly clear and shining, was discernable, and supposed to be the mucous of the exposed eustachian tube.

November 13. Only traces of pus in the external auditory meatus; small, soft necrosed masses detached from the length of the canal and removed with forceps and syringe.

November 14. Morror illumination in wound canal reveals presence of necrotic bone mass, attached to posterior wall of sinus. Examined with probe, it was found loose, and with forceps this, the third sequestrum, was easily removed.

November 15. Discharge very slight. Another small sequestrum was removed from the upper wall of the sinus. Patient is beginning to cough; a hoarse, short cough with frequent expectoration.

November 16. Discharge practically nil; a slight serous exudation noticed, similar to that found on granulating surfaces. Profuse granulations filling sinus.

November 20. Again some slight discharge. Located a small focus near the distal end of the bony portion of the internal auditory canal, with accumulation of epithelial shreds and pus.

November 25. Discharge of an even, yellowish green color, of thick consistency and increasing quantity. Cough has become more aggravated, loose, and expectoration profuse and of a muco-purulent character. Microscopic examination of the sputa revealed the presence of the tubercle bacillus in large numbers.

December 10. A bone sequestrum presents near the wound wound orifice. In restlessness of patient during attempted extraction, the mass was pushed out of place. Free communication between the sinus and the external auditory canal exists, as indicated by probe in manipulation.

December 11. The sequestrum again presents, this time in external auditory canal; presents with long diameter of sequestrum transversely to the axis of the external auditory canal. After some manipulation, succeeded in turning and removing the rounded necrotic bone mass from the posterior sinus.

December 15. No discharge; wound looking comparatively dry. Thorough irrigation followed by dusting canal and wound with iodoform; very small gauze strips inserted.

December 19. Both wound canal and external auditory canal dry; dressing of four days' standing removed dry and unstained; drainage perfectly clear.

January 5. Above condition of wound unchanged. The patient is in lively spirits, talkative, and feels no discomfort from his recent stage of aural treatment. He is considerably emaciated, cough is still very harassing; expectoration very profuse. Physical examination, by

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courtesy of Dr. Herman, reveals the following: In apex of left lung there is cadaverous percussion sound, and cadaverous respiration, many gurgling rales. Over the entire area of right lung there are medium sized mucous rales, with slight percussion dullness; harsh inspiration over right apex; prolonged expiration of raised pitch; numerous subcrepitant rales. History of the case points to the probability of a rapidly developing phthisis pulmonalis. The mesenteric glands are enlarged and easily localized by palpation. The cervical and other lymph glands of the head present almost a "rosary" outline, so general, regular and continuous is their enlargement. The sputum analysis reveals the presence of numerous tubercle bacilli. Emaciation of the patient has been marked and rapid the past few weeks. A phthisical febrile reaction has also been noted; rise of temperature regularly, accompanied by night sweats and continued coughing.

By far the most interesting and important factor which presents itself for consideration in this case, is the *existence of the faculty of hearing on the affected side, after removal of the cochlea and deep structures of the petrosa.*

I have been thoroughly cognizant of the difficulties and responsibilities attending an effort to substantiate so radical a statement, and have necessarily adopted the most careful methods and delicate tests to convince myself of the accuracy of my conclusions. The most serious obstacle to contend with was the exclusion of the healthy ear from the sound tests which were instituted. In the majority of the tests made, I adopted the method suggested by Dennert and Lucae, with modifications. In determining what degree of sound perception still exists in an affected ear in a case of one-sided deafness, the healthy ear of the patient is stopped, turned towards the source of sound and the tests then made, the affected ear being alternately opened and closed. Whatever difference in the hearing then elicited, is attributed to the affected ear.

A more delicate modification of this method has been successfully used by Burnett. The patient is so placed that the affected ear is toward the operator. The healthy ear (the ear to be tested) is plugged. With the affected ear open, hearing tests are then instituted. Having thus reached the apparent limit of the *hearing* power of the *affected* ear, that ear is then closed, and the tests continued. If the closure of the deaf ear causes no difference in the hearing distance already obtained, it is fair to conclude that whatever amount of hearing exists is not due to passage of sound through the external auditory canal of the affected ear turned towards the test. In such a case the conclusion must therefore be, that sound has reached the brain through the agency of the healthy ear. If, however, the stoppage of the affected ear is accompanied by an absolute inability to hear sound tests, it is again rational to conclude that the difference in the hearing power must be attributed to the affected ear. Thus, the final conclusions: "*Whatever is heard just as well with the deafer ear stopped as when open, the better ear remaining stopped throughout the testing, must still be heard by the better ear through the head; but whatever is heard only with the worse ear open, the good ear being stopped, must be attributed to the worse ear.*"

The question might be asked, why cannot sound be conveyed to the deaf ear through the head, if it is conveyed to the better ear which is stopped and turned away from the sound source? The reply would be, that an ear which, either when stopped or open, perceives no difference in sound conveyed by the meatus, is not sensitive enough to hear sound conveyed to it through the head.

In the consideration of the case at hand, some conduction tests by aid of tuning forks were excluded, as they were deemed less delicate for a differentiation than aerial sound conduction. Furthermore, as our dealings were directly with an exfoliated labyrinth, the tuning fork, relative to bone conduction, was practically of no value.

The following tabulated relations will indicate clearly the conclusions reached in hearing tests of the affected ear:

Hearing Tests.	Hearing Capacity with Both Ears Closed.	Hearing Capacity with Affected Ear Open and Good Ear Closed.
Loud conversation.....	10 feet.	30 feet.
Whispered conversation.....	1 foot.	3 feet.
Sixty-inch watch.....	2 inches.	6 inches.
Politzer's accumeter designated by patient as a loud ticking watch.....	6 inches.	14 inches.
Galton whistle. Pitched high.....	12 inches.	2 feet.
Differentiation in sound of C from C4 tuning fork.	14 inches.	3 feet.
Musical notes of a loud long-sounding harmonium. Differentiation of C (3d octave) from C (5th octave)...	14 inches.	3 feet.

In the execution of the enumerated tests the patient was blindfolded; the plugging of the meatus was done by a competent assistant, the forefinger being used as a tight plug. Taking into account the age of the patient and all tendencies to a possible misrepresentation of the hearing capacity, the tests repeated at frequent intervals with many variations, yet the tests proved doubly valuable owing to demonstrable accuracy of the patient's statements.

Next in the order of importance of the clinical phenomena observed, was the preservation of the equilibrium and balance of the patient. As previously stated, one hour after the operation, patient was up and *walking*

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home with absolutely *no trace of altered equilibrium*. Walking and standing tests have been repeated frequently, varying the same in every conceivable way by blindfolding the patient, testing with closed eyes, permitting patient to walk under the influence of loud voices, etc. The results were always positive; his gait firm and steady; the power of equilibrium preserved to a nicety.

The factor of great interest is the prominent role played by the bacillus tuberculosis in the development of this case. Early in the history of the case a microscopical examination was made of the discharge from the ear, and the presence of the tubercle bacillus demonstrated. A physical examination at that time gave no indication of a phthisical onset. The free communication of the suppurative aural focus with the pharynx; the tendency to frequent swallowing of this purulent material infected by the tubercle bacillus; the gastro-intestinal disturbances; incessant coughing; profuse expectoration; febrile reactions; enlargement of the lymphatics of the entire system; rapid emaciation; great prostration; and finally, the involvement of the lungs, as determined by recent examination; the demonstration of the presence of the bacillus tuberculosis in the sputum—this well marked series of symptoms point to a development of a rapid phthisical process. It seems rational and reasonable to conclude that this acute phthisis is, perhaps, a secondary development of the original tuberculous process in the ear.

In maintaining my position in the case at issue, with my conclusions drawn from the careful tests made and clinical phenomena observed, I realize that I am treading on delicate ground, and that the presentation of these results opens for consideration a new phase of development in the theory of sound, and in the complicated functions of the labyrinthian structures.

It is not my purpose to discuss the pros and cons of the theories which the results attained in the present case may suggest, but to indicate in the presentation of this series of simple firm facts, the existence of some inaccuracies in the now accepted theory of sound.

Thumbs Bring $2,000.—The case of Kitchell v. Brooklyn Heights Railroad Company was instituted to recover damages for the loss of services caused by the amputation of the thumb of a 7 year old daughter of the plaintiff. Liability therefore was charged to the company sued on account of its negligence causing the injury which resulted so disastrously. A verdict for $2,000 was returned, and the general term of the city court of Brooklyn holds, Nov. 27, 1894, that, considering the importance of the thumb as a member of the hand, and how necessary its presence is to make the hand available for use in nearly all ordinary vocations, this is not excessive, a bill of $100 for medical treatment having also been incurred.—*Jour. Amer. Med. Ass'n.*

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The Most Rational Explanation of the Influence of Laparotomy Upon Tuberculous Peritonitis.

During the last fifteen years the question of the favorable influence of opening the abdominal cavity upon tuberculosis of the peritoneum has often been discussed in medical societies and medical journals. At the time when antiseptic fluids were used to irrigate the abdominal cavity in every laparotomy, it was supposed that this irrigation caused the disappearance of the tuberculous peritonitis, until, when after many disastrous results following such irrigation, the use of antiseptics was dispensed with by many surgeons, it was found that tuberculosis of the peritoneum was just as favorably influenced by abdominal incision unaccompanied by the irrigation with bactericidal fluids, and other hypothetical causes had to be made accountable for the explanation of this familiar phenomenon.

The entrance of light and air was then supposed to be one of the factors that might possibly cause the disappearance of the tubercles, notwithstanding the fact that lupus and other forms of tuberculosis of the skin are not influenced in the least by the access of light and air. Then the changed condition of intra-abdominal pressure upon withdrawal of ascitic fluid was, by some authors, made responsible for the healing process. After the observation was made, however, that tubercu-

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lous peritonitis without effusion also disappeared after laparotomy, the irritation due to the incision alone, or combined with the entrance of air, was generally considered to be the cause of the disappearance of the tubercular eruption. The adhesion of the peritoneal leafs and the consequent encapsulation of the diseased focus, causing a cheesy degeneration, was also one of the many hypotheses brought forward to solve the puzzle. Among the newest hypotheses is that of Nolen, who, after puncturing unsuccessfully two cases of ascites due to a tuberculous peritonitis and upon repuncturing used insufflation of sterilized air with a curative effect, made this insufflation responsible for the happy result.

According to Bumm the patients get well in consequence of a reactionary inflammation in the surroundings of the tubercles, accompanied by the entrance of round cells into the tubercles and destruction of the tubercle bacilli by means of phagocytosis. Ascites interferes with the inflammatory reaction, according to this author, by virtue of its chemical action upon the inflammatory process.

Very recently Albert Sippel has advanced the theory that under normal conditions the peritoneum possesses a great resisting power against tuberculous invasion, which resisting power is restored upon the irritation caused by the access of air or the changed conditions of circulation upon removal of the ascitic fluid. This view of Sippel is based upon the observation of a case of primary tuberculosis of the uterus and tubes in which, after removal of a diseased Fallopian tube, an eruption of tubercles upon the peritoneum surrounding the opening of the tube into the abdominal cavity, disappeared and, when some time afterwards the other tube became diseased, an eruption of tubercles took place on the corresponding side. Sippel also draws attention to the fact that possibly the effusion of a bactericidal serum, due to the irritation caused by the incision or the entrance of air, is the cause of the disappearance of tubercles, and almost at the same time H. Buchner has demonstrated that the alexines, which are the bactericidal ingredients of blood-serum, are present in the serum in quantities proportionate to the quantity of leucocites contained in this fluid. In other words, the greater the relative quantity of leucocites in the serum, the greater is its bactericidal property. This author, therefore, explains the healing action of laparotomy upon tuberculous peritonitis, by a numerous migration of leucocites into the abdominal cavity. This migration causes a great increase of the alexines of the serum and a consequent destruction of tubercle bacilli. Buchner arrives therefore at a similar conclusion by bacteriological research, which Sippel has reached by clinical observation, namely, that in consequence of the irritation set up by operative procedures, a serum is secreted which destroys the tubercle bacilli.

Buchner's explanation of the healing process of tuberculous peritonitis is, at the present time, no doubt the most rational, and based upon the most recent scientific research. The theory that the bactericidal properties of the fluids of the body play the most important role in bringing about immunity and the healing process of a disease, appears now to be incontestible and, although the process of phagocytosis plays more or less of a role in all healing processes, it appears to be, in most instances, very inferior to that of the bactericidal action of the alexines or other chemical ingredients of the blood and lymph.

Antitoxine for Small-Pox.

Dr. J. J. Kinyoun, Passed Assistant Surgeon of the United States Marine Corps, who was sent abroad by the United States Government to investigate the diphtheria antitoxine treatment, has simultaneously been conducting experiments in regard to the treatment of variola or small pox by its antitoxine. He reports the results to the supervising surgeon general, as follows:

"Just previous to the reappearance of small pox in Washington I had made arrangements with Dr. Ralph Walsh, proprietor of the National Vaccine Farm, to conduct a line of inquiry concerning the nature of vaccinia, and, while engaged in this, took advantage of the cases of small pox to put a theory into effect. It has been already demonstrated by Maurice Reynaud and Sternberg that the blood serum of an immune animal destroys the potency of vaccine lymph. It had occurred to me, as well as to others, that this fact could be utilized in the treatment of small-pox, by the injection of this serum in patients suffering with this disease.

"Accordingly, on December 23, 1894, I took a liter of blood from a heifer calf which had been previously vaccinated on November 26. A part of the serum was transferred to a small sterilized flask, while another part, of equal quantity, was passed through a special filter in order to remove the blood corpuscles and any chance bacteria which might have contaminated it.

"I prepared a considerable quantity of this filtered serum and sent it to Dr. Elliot, the physician in charge of the small pox hospital, accompanied with the request that he would use this serum upon such cases of variola as were, in his judgment, suitable for the experiment."

Dr. Kinyoun submits elaborate notes taken by Dr. Elliot of the effects of the treatment, from which these conclusions are drawn:

"From the history of the two cases treated with the serum it appears that it does have a modifying effect upon the disease, especially upon the eruption.

"I am informed by Dr. Elliot that it was the belief that by administering the serum to the first case life was prolonged at least seventy-two hours.

"Since it appears possible to modify the postular stage of small-pox, and in this case have little or no pitting follow, it certainly appears reasonable to assume that it would have even yet a greater power over the disease in its first stages.

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"Since it seems possible to mitigate the attack of variola, it also appears rational to presume that the serum would have power to render susceptible persons refractory to the disease."

Dr. Kinyoun announces his intention of continuing his investigation on these lines, and submitting his conclusions in a future report.

CORRESPONDENCE

Morphine Habit.

Editor MEDICAL REVIEW.—Under the head of "correspondence" in your issue of January 5, 1895, I read with much interest a communication signed W. H. B., his experience with the morphine habit, and as he is in a critical condition and requests comments on the treatment of the habit, I offer him the following suggestions, believing, if they are carefully and properly followed he will rid himself of this most damaging habit. From a statement of his condition, the plan of treatment at once suggests itself, and I briefly outline it:

1. Discontinue the morphine.
2. Repair the damage done to the system by its use.

The proper way to discontinue it is to *gradually* reduce the dose, or quantity used daily. As the time for taking the accustomed quietus arrives, have it *accurately* measured out each day, making the dose 1, ½ or ¼ grains *less* than that of the preceding day, until the dose is reduced to $^1/_8$ of a grain. The quantity by which it is reduced daily, is best determined by experiment, possibly the system will not admit of a reduction of more than $^1/_8$ of a grain daily, this point should be watched most carefully and the greatest possible reduction made, consistent with the welfare of the patient. Beginning with this reduction in the dose, use a tonic of strychnia $^1/_{30}$ or $^1/_{20}$ of a grain with full doses of iron and quinine with nutritious diet, hot and cold bath, with friction over the entire body and plenty of outdoor exercise. When the dose has been reduced to $^1/_8$ of a grain daily, the system will as imperatively demand this, as when 10 grains daily were used, but the time has now arrived to bid farewell forever to this curse, for such in its most hideous form it has been.

As a substitute for the morphine get a quart of the *commonest* whisky that can be found, get the commonest, because the free use of it will so disturb your digestion that you will gladly discontinue it. Whereas if you used good whisky possibly it might not cause you a spell of indigestion and you would become so fond of whisky it would soon prove as great a curse to you as the morphine had been, and there would really be no gain.

When the usual time for taking the morphine arrives, instead of the morphine take about 8 ounces of the common whisky, retire to your bed and very soon you will be in a condition to have no desire for morphine *that* night, *i.e.*, taking it for granted, that night time, is the time at which the usual dose is taken. The next evening, as the time arrives, when you have been accustomed to take the morphine, instead of it, take another dose of 4 or 6 ounces of the common whisky. Continuing this plan for three or four days in succession, taking each day a less quantity of whisky than the preceding day, unless the whisky so nauseates that it can not be continued, when large doses of quinine can be substituted and continued for a week or month, even should the common whisky not nauseate, it can be discontinued after four or five days and the quinine in full doses kept up for one or more weeks, which together with the tonic treatment and hygienic measures suggested will overcome the desire for morphine. Never was a greater mistake made, than the sudden and abrupt withdrawal of morphine or opium form the person habituated to its use, without the substitution of an appropriate stimulant. The above suggestions are offered with the understanding that the person using morphine appreciates the danger he is in, and has a desire to get rid of the habit and that he has sufficient will power left to make an earnest effort to abandon it. For one that has lost his will power, temporary restraint in some suitable private institution is suggested.

I regret that W. H. B. has not given his name and address, and I sincerely hope, if he reads the above suggestions and adopt them, he will report the result, both to your journal and direct to me.

R M. HIGGINS, M.D.

Webster Groves, St. Louis Co., Mo., Jan. 15, 1895.

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Editor MEDICAL REVIEW.—In corroboration of the views of Dr. Boyd, in regard to the morphine habit, as published in the REVIEW of January 26, 1895, I beg leave to allude to a single case treated by me many years ago.

Parson S, a retired Methodist preacher and wealthy cotton planter of Mississippi, aged about 60 years, had been, in earlier years, celebrated as a revivalist; and to enhance the powers of his eloquence he had fallen into the habit of taking a dose of morphine, on occasions of protracted meetings, to sustain his exhausting efforts. The habit had become firmly fixed in the preceding twenty years, and gradually increased until it finally amounted to twenty-four grains, which he took at one dose every day; and notwithstanding the enormous quantity taken, his health was seemingly little impaired, though his eccentricities were quite obvious. His application to me for relief was simply a matter of conscience, believing that he was committing sin. He had made frequent efforts to free himself from the habit, but always failed.

The prescription employed consisted mainly of morphine and tincture of nux vomica calculated to run

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through a period of sixteen weeks, the morphine to be gradually dropped out at the end of the twelfth week, but the same *apparent* solution to be continued to the end of the next month. The medicine was prepared by myself at the end of every week to avoid exposure, when he was to come to my office to have the bottle replenished. On his visits I inquired concerning his health, but made no allusion to the treatment, all that having been settled at the beginning.

At the end of the fifteenth week—three weeks after the morphine had been entirely omitted—I ventured to suggest that he should try to leave off all medicine for the ensuing week as an experiment, which seemed to startle him, and he vehemently declared that he would die without it. Then, stepping into the next room, I filled the bottle again, omitting the morphine, of course; and when he returned for another supply, I looked him sternly in the face and said: "Parson S., this joke has gone far enough. I pledge you my word that you have not taken a single particle of morphine for the last month." He was utterly astonished, and after pressing his open hands to his face for a moment he broke into a laugh and declared that he was forever done with morphine, and so he was to the end of his life.

This is only one case of the many I have treated with equal success, and doubtless this might have been relieved in much less time than three or four months, but it is always best and safest to adopt treatment to the length of habit.

The process by which the nervous system adopts itself to the gradual diminution of morphine, is an interesting study, involving a principle reaching far into the mysteries of life and intellectuality. One of the principal safeguards of all living systems is the power of adaptation to altered conditions so familiar to physiologists; thus we may observe the octoginarian going about with apparent health and vigor, while bearing within him a crippled organ unable to perform its duty, and as it struggles to carry the burthen, compensation comes by the intervention of sympathetic associate organs, and health again seems to be established. We observe that after Parson S., had been exempt from the influenced of morphine for three weeks and felt no want of it, he clamored for it vehemently when a proposition was made to leave it off; and what does that signify? Evidently that we have to deal with the mind as well as the body, and therefore the patient should have no knowledge of the doctor's plan, nor recognized any change of medicine. He may recognize the taste and color of the spts. of lavender and extreme bitterness of the nux vomica, but he can not detect the diminution or absence of morphine, while the alteration is being made so slowly and minutely as to be inappreciable to the nervous system.

The opium habit, once comfirmed, completely dominates the victim, and he can not escape from its toils by the energy of his will, and he is lost without external aid, the method of which should be kept from his apprehesion as much as possible. If it has continued but a few months or years, then Dr. Boyd's plan would doubtless succeed without the practic of deception or mystery, the patient understanding the plan from the beginning; but a case of 10, 15 or 20 years standing, with all the functions and powers of the system firmly warped into abnormal condition, would seem to required much more time and some ingenuity.

R. H. Dalton, M.D.

3825 Finney Ave., St. Louis Mo.

Diphtheria.—Antitoxine.

Editor Medical Review.—No management to prevent the appearance and spread of diphtheria, or treatment to limit its fatality, has yet been discovered that gives entire satisfaction. In our hands, the best results, in the way of a preventive, have come from the use of chlorine water. When diphtheria appears in a family, we isolate the sick, if possible, and thoroughly spray the throats of all those not yet attacked, with chlorine water, at least three times a day, and in some cases, where the sick cannot be well isolated, we use the spray as a preventive five or six times daily. But recently, we have had four cases of diphtheria in four different families, where there were from four, five and six children respectively, and after the first case in each family no others appeared. We attribute the escape of these children to the use of chlorine water spray. This is a simple measure and anybody can use it.

As a method of treatment, we have had the best results from chlorine water used as an injection through and beneath the diphtheritic membrane, which generally appear first upon the tonsils. This chlorine water injection into the diseased tissues is made with an instrument prepared specially for this purpose. It is a small syringe, armed with a tube about six inches long, upon the distal end of which are fixed six hollow needles, about an eighth of an inch long. Where the diseased part can be reached with this injection, upon its first appearance, this treatment, if well executed, is almost a certainty. Diphtheria, at the beginning, is a local disease, and it seems that chlorine water destroys the microbes and the disease is ended. But if the diphtheritic membrane has already extended to the larynx or nasal passages, or first making its appearance in either of these localities, where we cannot reach it with this local injection treatment, it is of but little avail. Fortunately, however, many cases are limited, at first, to the tonsils, when we can successfully apply this treatment and thus prevent the extension of the disease to other parts, and a cure is the result. While we depend greatly upon these injections of chlorine water in the treatment of diphtheria, we use it as a spray also, upon the diseased parts, every three hours.

The antitoxine treatment of diphtheria, when we can get it, certainly promises to be the best and most successful method of all. It is not only a preventive, but,

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when used early in the disease, *it is a remedy to cure.* We have amply provided ourselves with the best quality of antitoxine to be found, prepared in Berlin, after Aronson's method, and from the New York Biological Institute, and all who desire to avail themselves of its reputed virtues shall have prompt attention and careful management. It should be known that a single dose of antitoxine, which is perfectly harmless, is reputed to be sufficient to furnish any child complete immunity from diphtheria—*prevent it from taking the disease*—for several weeks or months after its administration. It seems to furnish very much greater protection against diphtheria, for a time, than vaccination gives against smallpox.

GEO. C. PITZER, M.D.

St. Louis.

Morphinism in Children.

Editor MEDICAL REVIEW.—I am desirous of adding to the clinical literature of morphinism in children. If any reader of your journal has noted a case and will furnish me details, I will appreciate the favor and give full credit.

J. B. MATTISON, M.D.

Brooklyn, Feb. 1, 1895.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, Jan. 5, 1895, the Presient, F. D. MOONEY, M.D., in the chair.

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DR. G. F. HULBERT presented a "Gall Bladder" filled with stones, and very much increased in size.

The patient from whom the specimen was taken, is a woman, 25 years of age, a typical blonde and rather sparely built. She has been obliged to earn her livelihood in part, but has been temporarily disabled at times, from a continued distress in the right hypochondriac region. The trouble had been diagnosticated at various times as pelvic in character, the pain being considered as reflex, but examination failed to reveal any ovarian trouble. Menstruation was regular, but the discharges were somewhat scant and pale in character.

Speaker saw the patient for the first time 18 months ago, and after a very careful abdominal examination failed to find the cause of the pain. General constitutional treatment had a beneficial effect, so much so that the pelvic difficulty disappeared. She returned four months ago, complaining of that same distress and, in addition, had a similar pain on the opposite side. The pain was not paroxysmal nor colicky in character, but rather a constant feeling of heaviness, a dragging pain, subject to occasional slight exacerbation. Examination at this time led to the discovery of a distinct lump on the right side, extending from the cartilates down to the crest of ilium. It was firm in character, giving the sensation of kidney or liver tissu, and was freely moveable, so that it could be pushed above the lower edge of the costal cartilages.

An operation was done this morning at 9 o'clock, the incision being a longitudinal one, a little external to the outer border of the rectus muscle. The gall bladder presented at the opening as soon as the incision was completed and could be very readily delivered. There were no adhesions whatever. It was filled with gallstones which were suspended in a quantity of fluid and a chain of which could be traced along the line of the cystic duct close to its junction with the common duct. These latter were very readily dislodged, but the fluid contents of the bladder could not be forced into the duct. A thickening and occlusion of the cystic duct was determined after careful examination, and the bladder was therefore removed entirely. A small gauze pack was placed from the pedicle to the upper angle of the opening, and the wound dressed in the usual manner.

There was also found a peculiar development of a lateral lobe of the liver, the so-called "apron lobe" described by Riedl. It was this lobe which constituted the lump detected by abdominal palpation.

Excepting the persistent disability, there were no symptoms in the case indicating the condition found. She never had an attack of hepatic colic, no jaundice and no gastro-intestinal disturbances.

Reviewing the operation and the method of dealing with the trouble, speaker said there might be some criticism made on the manner of dealing with what might be called the stump. It might be contended that it should have been securely covered by suturing the peritoneum over it. He had merely curetted and cauterized it and dropped it back into the cavity. The reason for so doing was to save time; besides, it is doubtful if the leakage into the peritoneal cavity of a small quantity of bile would have produced much trouble. The influence of normal bile on the peritoneum is not yet definitely established, but speaker was inclined to attribute the bad results so far noted to an infectious element existing in the bile, and not to bile of a normal composition. This infection might occur very readily where there had been a suppurative process going on within the gall bladder, or where biliary fistulæ had developed externally.

Another important question to decide, is, what ought to be done in case the cystic duct is occluded and the common duct patent and how to deal with occlusion of the common duct with a patency of the cystic duct? When the cystic duct is occluded and it is impossible to force the contents of the bladder into the common duct, it is very doubtful if we are justified in trying to force

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this passage way open and assume the risk attendant upon such a procedure. Having forced a passage, it is doubtful whether it will remain patent. Such was the condition present in this case, and these were the reasons for removing the gall-bladder in its entirety. Besides, the patient had had no use of her gall-bladder for the past six or seven years.

Where the common duct is occluded and the cystic duct is patent, the problem is more grave. The present tendency is probably in the right direction; namely, to establish a direct anastomosis between the bladder and intestine. Sims' method, of establishing a fistula first, exposes the patient to the dangers of a second operation, and is not to be recommended, especially since the direct anastomosis is rendered comparatively simple by such modern appliances as Murphy's button.

The reason for presenting the specimen so early was to demonstrate its beauty, although that is not as perfect as it was directly after removal. Speaker promised to report the result later.

Dr. L. H. Laidley recalled a case, occurring in his practice four years ago, whose symptomatology was similar to that of Dr. Hulbert's case. There was a vague feeling of heaviness and a constant disability. The tumor gave the impression of a floating kidney. An exploratory incision was made and the gall-bladder was found to be about as large as the one presented tonight, and was also filled with stones. Instead of removing it, however, it was opened, the contents cleaned out, and the edges stitched to the abdominal wound.

Speaker received a letter from this patient a short time ago, in which she states that there has been an occasional re-opening of the wound, when a discharge of bile or fluid of a serous nature occurs. She has consented to a second operation, in which an attempt will be made to close the opening permanently.

One of the main questions to be settled in these case, is, whether there are any gall stones left in the ducts.

Dr. Hulbert had determined that point beyond question, by tracing the common duct from the intestines to the liver, and when the cystic duct was cleared of the calculi, it was found thickened and occluded. Then, the fact that the patient has had no jaundice or gastro intestinal disturbance, argues against the possibility of a complete closure of the common duct.

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Dr. M. A. Goldstein read a paper (see page 124) entitled,

Exfoliation of the Cochlea, Vestibule and Semi-Circular Canals. Presentation of the Patient and Specimen.

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Dr. Robert Barclay spoke on the case as follows:

From the list of reported cases of exfoliation of the labyrinth, presented as a summary by the essayist, there seems to have been omitted the striking case reported by our own Dr. Pollak, in 1881, in the *Archives of Otology*, of that year. In this case, the auditory canal, mastoid cells and petrous portion of the temporal bone became sequestrated and were then removed. As Dr. Pollak is present, it is hoped that he will make a few remarks on the case.

Such extensive destruction as this is rare, the most frequent condition being that of exfoliation of the cochlea, where, after the problem of saving has been satisfactorily solved, the question next arises as to the possibility of hearing without this portion of the labyrinth. It is fortunate that the essayist has introduced here tonight the subject of hearing after exfoliation of the cochlæ, a question of exceeding importance to us, and one particularly deserving of our close consideration inasmuch as no less than three of our local professors of otology have given public expression to their views on the subject, in a manner, and to an effect, which, at best, appear intemperate, if not, indeed, not positively misleading.

At a meeting of the Medico-Chirurgical Society of this city, on February 21, 1887, in the essay of the evening by Prof. M. D. Jones, this statement was made (and I quote from the essay as published in the *St. Louis Courier of Medicine*, of April, 1888, page 294): "There is but one sure sign of disease of the cochlea, and that is absolute deafness." In the discussion of the essay which followed (reported in the same periodical of May, 1888, page 471), Prof. Chas. A. Todd is credited with the following remark: "As to the statement of the Glasgow physician, to which Dr. Jones referred, that the cochlea may be entirely necrosed and yet hearing be preserved; so a man with an enucleated right eye may see with the left. He could but believe that in these cases hearing is through the other ear."

And Prof. H. N. Spencer (here I again quote the *Courier* of the same page), "agreed with Dr. Todd that it is as much an absurdity to suppose that a man can hear with an exfoliated cochlea, as to suppose that he can see with an enucleated eye. He don't think it possible to explain these cases on any other ground than that the observer has been deceived."

Now, when three of our local teachers of otology, in a matter so important, express themselves with such positive prejudice, in flat contradiction to the reports of eminent observers who are universally accepted authorities in their special fields of work, it behooves us to give the subject more than a passing thought before surrendering our judgement to any *ipse dixit*.

Before the case of Dr. Samuel Sexton, of New York, five or six had already been reported: These by Drs. Gruber (of Vienna), Guye (of Amsterdam), Sassell, Christenneck, Jacobson, and, if I mistake not, Bezold (of Munich); and there may be others which have escaped my notice. In a letter upon the subject, Dr. Samuel Sexton says (see the *Courier of Medicine*, August, 1888, page 175): "I have seen several cases where exfoliation of the cochlea has not been attended with total loss of hearing. I fancy no one disputes that in one of my cases marked hearing remained."

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Now, all these observers are skilled otacoustic diagnosticians, and would certainly not have hazarded a positive statement as to the hearing after exfoliation of the cochlea, until they had first exhausted all the established and accepted tests for differentiating this from the hearing of the other ear, and satisfied themselves of this fact. I hold that the reports of these competent observers are worthy of mature consideration, of a suspension of judgment and *dictum*, if not, as I believe them to be, entirely to be depended upon and worthy of universal deference.

Supporting the probability of the truth of these reports, the following quotations may be introduced: "The functions of the labyrinth are theoretical, but experiments on lower animals make it probable that the maculæ and cristæ acusticæ of the saccules and ampullæ can perceive both noise and tone." ("Burnett's System of Disease of the Ear, Nose and Throat," Vol. I, page 90).

"The explanations of the functions of the cochlea are still more hypothetical. The cochlea is supposed to perform a more important *role* in audition than the rest of the latyrinth. The external and internal hair cells of Corti's organ are supposed to be the terminations of the auditory nerve. Corti's rods are not found in birds and reptiles, and consequently are not an essential part of the terminal apparatus." (Burnett's, *Op. Cit.*, page 91).

"The imprisoned nightingale will vary its natural song with such passages as please it from the songs of other birds which it has heard. Musical instruments or a melodious voice excite and stimulate its talent; it tries to sing in unison," etc. (Robert Ball, "Wonders of Acoustics," page 11). "Lizards are also said to be remarkably alive to the influences of music." (Robert Ball, *Op. Cit.*, page 58).

In conclusion, on this point, I would remark: Birds having no cochlea—the mocking bird, starling and parrot nevertheless hearing and repeating musical tones or human speech—why publicly denounce as impossible or as absurd the statement of competent observers that exfoliation of the cochlea may take place without entire loss of hearing?

Respecting the otacoustic tests for the diagnosis of one-sided total deafness, the one mentioned by the essayist of the evening is not an infallible one; nor is it the best, nor preferable one. There are others, such as the bone conduction test with the tuning fork, where the ear suspected of total deafness is left open first and then stopped, during contact of the tissues with the vibrating tuning fork. Another, the moving of a vibrating tuning fork up and down, close to the meatus of the doubtful ear, where a vibration of the tone will be perceived if hearing remain in the tested ear; and so on, an otologist, as a rule, not being satisfied until he has employed these and other tests for differentiating the hearing of the two ears, in cases of suspected total deafness of one side.

Dr. Pollak said that the statistics referred to by the essayist show how much reliance may be placed upon them generally. The case referred to by Dr. Barclay was reported as early as 1881, and still it is not included in the statistics of the European observers.

The patient was a girl, 5 years of age, who had been sick since early childhood. When brought to the clinic, the ear stood out at right angles to the head, the mastoid region was enormously swollen, and there was constant pain. In the center of the swelling there was a small black speck, about the size of half a grain of wheat, and proved to be rough and hard and slightly moveable. It was grasped with a forceps and gradually dislodged until it was extracted in its entirety. An enormous hemorrhage followed. The specimen proved to be the whole bony part of the ear, and its removal left a cavity which looked like lined with velvet. The patient got well very fast, and in less than four weeks everything was in good order. There was no facial paralysis. Patient has since grown to womanhood, and the defect is now hardly noticeable.

Of course, there is no hearing in that ear; speaker said it is absurd to speak of such a thing. You might just as well speak of seeing with an enucleated eye.

The most interesting feature was that the specimen was presented to this Society, and it did not even excite a discussion. It was next shown to a leading aurist of this city, who denied that it came from the ear at all. The specimen was then sent to Dr. Knapp, of New York, who kept it, thanking the donor for it, and saying that so valuable a specimen should not remain in the West.

Dr. Murrell thought that cases of this character are of comparatively frequent occurrence. He had seen quite a number of exfoliation of the bony part of the auditory apparatus, but none where the entire labyrinth came away in one piece. Where the labyrinth is exfoliated, there cannot possibly be any hearing left, for that is the whole apparatus through which the function of hearing is obtained.

An important question to determine, is, whether a person may hear after removal of the cochlea. If we look for a moment at the anatomy of the internal ear, we can hardly conceive how the cochlea can be exfoliated and hearing remain in that ear. We know that the labyrinth consists of a bony and a membranous portion, and that the labyrinthian structures are intimately connected, and communicate, the one through the other, with the vestibule and the semi-circular canals. It is almost impossible for us to sever one part without emptying the endolymph and perilymph, and destroying the usefulness of the organ entirely. Although, in a paper read by an eminent New York otologist, it is claimed that definite hearing remained after exfoliation of the cochlea, speaker thought that it would be irremediately lost in an ear so affected.

Dr. J. B. Shapleigh said that exfoliation of the cochlea is not so extremely rare, and the process is favored by the construction of the petrous portion of the temporal bone. The capsule of the labyrinth is firm

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and surrounds bony tissue of cancellated structure, so that the necrotic process can work around and dig out the capsule more or less completely.

He was inclined to think that hearing could remain after an exfoliation of the cochlea, and based his opinion, in a measure, on a case seen by him in Prof. Gruber's clinic in Vienna. The test for hearing is a subjective one, and reliance must be placed upon the observations and statements of the patient; so that in a case like the one reported to-night, on account of the youth of the patient, it is extremely difficult to determine positively whether there is any perception of sound in the ear. Also, from the large destruction of other parts of the labyrinth as well as of the cochlea, in this case, there must remain great doubt as to the ability to hear. In the case occurring in Prof. Gruber's clinic. the boy was 13 or 14 years old, and consequently more reliance could be placed on his observations and statements. The air conduction test was the one most relied upon, and the conclusion arrived at by all those who saw the case, was, that the boy could hear some with the diseased ear.

Another case referred to by the speaker seemed to indicate the possibility that sound could reach the brain by two different paths; thus offering a possible explanation of how hearing could remain after an exfoliation of the cochlea. The case was one in which musical sounds produced extensive reflex nervous phenomena, so that the circulation, respiration and even consciousness would be affected; whereas, on hearing noises, no such phenomena occurred. The inference is—(and it is, of course, only a theory)—that there is one path for regular musical sounds to reach the ear, and another path by which non-musical sounds or noises are conducted. This theory may explain the possible retention of hearing power after exfoliation of the cochlea, on the supposition that the sound passes through some other medium than the cochlea.

Dr. Barclay, speaking a second time said: The question of how it is possible for hearing to persist after exfoliation of the cochlea, is not a difficult one to explain, if we lay aside, for a moment, the beautiful theory of Helmholtz, respecting sympathetic vibrations in the organ of Corti, and consider that of Rutherford, the "Telephone Theory of the Sense of Hearing." This latter theory is not without its advocates, notably Dr. Sexton, of New York (Samuel Sexton), "The Ear and Its Diseases," pages 54 to 58), who quotes at length from Rutherford's Lecture before the British Medical Association, published in *The Lancet* of January 1, 1887. The theory was originally suggested by the phenomena of telephony and telegraphy, simple or multiple messages being transmitted over a single wire and reproduced, there being at the transmitter no apparatus for the analysis of sonorous vibrations. It was presumed that the auditory apparatus acts in a similar way: "that the cochlea does not act on the principle of sympathetic vibration, but that the hairs of all its auditory cells vibrate to every tone, just as the drum of the ear does; that there is no analysis of complex vibrations in the cochlea or elsewhere in the peripheral mechanism of the ear; that the hair cells transform sound-vibrations into nerve-vibrations similar in frequency and amplitude to the sound-vibrations; that simple and complex vibrations of nerve molecules arrive in the sensory cells of the brain, and there produce, not sound again, of course, but the sensations of sound, the nature of which depends, not upon the stimulation of different sensory cells, but on the frequency, amplitude and form of the vibrations coming into the cells, probably through all the fibers of the auditory nerve. On such a theory the physical cause of harmony and discord is carried into the brain, and the mathematical principles of acoustics find an entrance into the obscure regions of consciousness.

In experimentation on this theory, Rutherford found that ten distinct induced-electric impulses a second in the motor nerve of a frog's leg would produce each second ten distinct muscular contractions; but that forty such impulses a second would produce what appeared to be one continuous contraction. He discovered, however, that the muscle so stimulated generated an audible tone whose pitch was forty vibrations a second. He found that by sending 352 electric stimulations a second along the motor nerve of a rabbit, he could get from its corresponding muscle a tone of a pitch of 352 vibrations a second, or that of F in the lowest space of the treble clef, the same tone produced by the vibrating wings of a bumble bee. In the honey-bee the motor impulses cause the wings to vibrate and produce a tone two notes higher than that produced by the wings of the bumble-bee, or A of the treble clef, which represents 460 vibrations a second; thus demonstrating the fact that a high number of nervous impulses can be sent through a motor nerve. This being the fact for the motor nerve, would it not be reasonable to presume that the more highly organized nerve of special sensation, the auditory nerve, for example, can transmit with greater rapidity? Rutherford claims that this theory does away with certain difficulties insurmountable on Helmholtz's theory of sympathetic vibration in the organ of Corti in the cochlea.

Dr. Goldstein had taken his statistical data from the most voluminous German works, and none of them mention Dr. Pollak's case, which explains how he failed to enumerate it.

As far as the tests are concerned, speaker referred to his old preceptor, Prof. Utbantschitsch, who cites the tests of Dennert and Lucas as the one used in the courts of Austria, in medico-legal examinations, and as the most conclusive one for establishing a differentiation. All other tests referred to to night, although not described in detail, were made and taken into consideration.

It is certainly a difficult task to assume that hearing still remains in an ear in which so much that is vital to the organ has been lost. However, in this case the cochlea is gone, and, as far as can be determined by all

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tests at our disposal, the boy has sense of hearing in that ear.

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Stated Meeting, Saturday Evening, January 12, 1895; the President, E. D. Mooney, M.D., in the Chair.

***

Dr. Henry Summa presented a specimen of "Ovarian Pregnancy," and a "Graefian Vesicle, Containing an Ovum," and spoke as follows:

I would beg your indulgence for a few minutes in order to report a case of extra-uterine pregnancy, and to present the exceedingly rare specimen obtained by me at the operation, which, unfortunately, terminated fatally. I would also request that the Society place the matter on record, in view of the fact that the majority of the reports of similar cases were probably due to a misnomer of the specimen. The case I wish to report and the specimen I show is one of *true ovarian pregnancy*.

In regard to these cases, I find the following in the "Lehrbuch der Geburtshilfe," von Dr. Max Runge, Professor of Obstetrics and Gynecology, and Director of the University Woman's Clinic in Goettingen; published in 1894, by Julius Springer, in Berlin.

"Ovarian pregnancy is very rare. Only a few of the reported cases have been able to withstand the criticism (Werth). The proof of the *presence* of the *tube* on the affected side, and that it is not in the least concerned in the formation of the embryonal sac, is *an absolute necessity* in order to make the anatomical diagnosis of ovarian pregnancy. The ovary under consideration should be absent, or form a part of the embryonal sac. The ovarian ligament passes over into the embryonal sac."

I think a careful inspection of the specimen presented by us will show that it conforms with the requirements laid down by Runge.

It might also interest some of the gentlemen present to inspect the Graefian vesicle herewith presented, and obtained from the same patient.

Dr. Funkhouser thought that a careful examination of the specimen shown should be made by several microscopists, so that some light might be thrown upon the subject now under discussion, whether ovarian pregnancy is possible or not. Personally, he could see no reason why this should not be possible. The specimen of Graefian vesicle should also be examined, as it may explain the cystic degeneration so often accompanying salpingitis. Speaker had had a number of cases recently in which this condition obtained and it may be possible that what we were in the habit of calling cysts, were only dilated Graefian vesicles whose contents had become fluid. Noble Smith has recently referred to the subject.

The condition of the fimbriated extremities of the Fallopian tubes found in this case, may, in part, explain how ovarian pregnancy could occur, and also demonstrate the physiological function which these parts perform in the occurrence of pregnancy. The condition is a very common one in cystic degeneration of the ovaries, it being impossible, in some cases, to distinguish the parts.

***

Dr. A. H. Meisenbach read a paper, describing his "Method for Operating for Gall Stones," with report of a case.

Dr. Funkhouser testified to the difficulty experienced in passing a probe through the cystic duct; in fact, it is impossible to do it at times. The absence of icterus may be explained when we remember that gall stones may be lodged in the bladder without occluding the common duct.

The operation performed in this case, simply suturing the gall bladder to the parietes and opening it, is being discussed by the profession in connection with total extirpation of the bladder. Experience will decide which is preferable.

ABSTRACTS

MEDICINE.

Summer Diarrhea, Cow's Milk as Diet, and Sterilization of Milk.—Dr. Adolf Baginsky discusses this important subject in the *Berliner Klin. Wochenschrift*. The great mortality among children in large cities from summer diarrhea has been the occasion of extended study. For a time the tendency was to ascribe the death to the direct effect of high temperature. This is unquestionably an important factor, but the heat acts by producing decomposition of the food-supply, particularly cow's milk. The statistics or the Berlin Bureau of Health, collected by Bockh, show that during five years there died two thousand five hundred and sixty seven suckling who were fed at the mother's breast or upon asses' milk; whereas during the same time thirteen thousand four hundred and thirteen sucklings fed upon cow's milk died. Of course some of those supposed to be breast-fed may have been helped out with cow's milk, so that the former figures are larger than they would be if all such could be excluded Since both brest fed and bottle fed chrildren must have been exposed to the same atmospheric conditions, the difference must have been due to the cow's milk, which is rendered injurious by high summer temperature. Cow's milk alone is not injurious, for the mortality under its use subsides in winter. It was naturally suspected that micro-organisms or their products were concerned in making milk injurious, and it has been established that microbes thrive better and are more active in higher than in lower temperature.

The injury to the child's organism by microbes can be brought about in a threefold way:

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1. The microbes may produce lactic acid, formic acid, acetic acid and the like in milk. They or their product can produce intense intestinal irritation; their activity can begin outside the body in the milk and continue in the intestinal tract of the child.

2. The micro-organisms may in themselves be poisonous, or their products may be so violently poisonous that they are injurious in small quantities. The poison can arise in the milk outside the body and be absorbed with the milk. This poison is chemical; no longer united with the life of the microbes, but free and apart from the microbes.

3. The childish organism may receive from its surroundings—air, water, washing, clothing, and the like—microbes capable of developing poisons out of food which is itself germ free, especially when the food is unsuitable and stays long in the intestinal canal.

Baginsky's studies have led to the discovery that in the diarrheal stools of children, in addition to the normal intestinal bacteria, there are a series of micro-organisms, some bacteria, some cocci, also yeast forms, which possess the peculiar power of decomposing albuminoid bodies and producing as a final product ammonia. From one of the bacteria cultivated by Baginsky and Stadhagen it was proved that it developed from beef juice and milk, besides a moderately poisonous base and ammonia, a poisonous body belonging to the peptones. A specific bacterium present in all diarrheas has not been found.

Baginsky believes that in the summer diarrhea of children, and especially in cholera infantum, we have to do with the action of saprogenous bacteria, which form poisonous peptones out of the nitrogenous bodies present in the food. These may, when absorbed, exercise an injurious effect upon the infantile organism. In the further progress of decomposition there arise, in addition to basic product (ptomaines), other product,—iodol, phenol, etc.,—until the whole process reaches its end with the formation of considerable quanties of ammonia and possibly of sulphuretted hydrogen. The more intenst the decomposition process under the united action of several of these saprogenous bacteria the more quickly may the final formation of very large quantities of ammonia be brought about. But it is the entrance of the entirety of the formed products into the lymphpaths and blood that causes the severe clinical symptoms.

Flugge has made the important observation that milk which has been sterilized by an insufficient method contains living bacteria, some of which are able to form poisonous peptone like product from the milk, which products have experimentally caused severe diarrhea in young animals.

The typical summer diarrhea occurring among the children of our large cities is the expression of an intestinal poisoning. The processes are throughout analogous to those which occur in Asistic cholera, and the symptoms are so similar as to lead to their confusion.

Flugge advises that the ordinary Soxhlet method of sterlizing milk should be discarded as inefficient, and that the milk should be boiled on the hearth in a milk can with perforated lid, and then quickly cooled and kept in a cool place. But the latter entails subsequent handling of of the milk, with the evident risks of contamiation through the open lid and as it is poured from the can into a nursing-bottle.

Clinical experience is decidedly against Flugg's advice and in faver of the Soxhlet procedure, so far as effective sterilization is concerned.

Baginsky, in 1883, reported some experiments showing that through overheating of the milk a very essential change occurs in its composition; the casein behaves differently toward pepsin and hydrochloric acid, there is a diminished digestibility in artificial gastric juice, and finally a breaking up of the phosphorus-holding organic bodies, of the lecithin and nuclein of the milk, and, moreover, a partial decomposition of the sugar. Baginsky also carried out some practical expriments in feeding children completely sterilized milk; while the children took it and throve upon it, the experiments were not thorough enough to be satisfactory. He is very carful to insist that sterilized milk can never in any way take the place of good mother's milk. On the other hand, he suggests no way by which the lessened digestibility of sterlized milk can be overcome. A cut is given of a sterilizing apparatus which he has introduced into the K. K. Friedrich-Kinderkrankenhaus. Since the employment of sterilized milk in this hospital the mortality from degestive disorders in suckling under one year of age has fallen from 78.9 per cent to 69.5 per cent. This shows to the credit of the Soxhlet method of treating milk, but the mortality is still far too high.

The Newer Antipyretics; Acetanilide and Phenacetine; their Drawbacks. — The *British Medical Journal* for December 22, contains an editorial on this subject in which the writer says that, although acetanilide is one of the most efficient antipyretics it is not altogether free from the objections attached to other drugs of the aromatic series. It induces symptomes of intoxication more frequently, perhaps, than any of the others, and they are at times more alarming. Its action on the nervous system is similar to that of antyprine, and its power of lessening pyrexia is even greater. The fall of temperature is usually accompanied by a more or less profuse perspiration, and it may attain its maximum in two or three hours and finally bring on depression and collapse; sometimes a rebound is ushered in with chilliness and rigor. On the other hand, says the writer, a few reports show that this drug, like antipyrine may send the temperature up in an unexpected way; its action on the heart may be very pronounced, and the utmost care is necessary in its administration to children and weakly individuals. There is a difference of opinion as to whether the depressive action attains the same degree as that following the employment of antipyrine. With the exception

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of miliaria produced by copious diaphoresis, bad effects on the skin rarely show themselves. An impression exists that acetanilide may induce or increase bronchial catarrh in children, although there is no evidence that it does so in greater measure than antipyrine; cyanosis is, however, more striking, as it may appear as the result of very small doses and persist for days after the use of the drug has been discontinued. Its prolonged administration, even in moderate doses, may give rise to a decided state of anemia; the onset of this is often rapid and it may reach a considerable degree. Gastric disturbance is not prominent, impaired appetite and nausea being only occasionally noticed.

The doses of acetanilide as an antipyretic vary from five to ten grains for an adult; for a child three years of age one grain may be given, and for children from ten to fifteen years of age the dose is from three grains to four grain and a half; it should generally be combined with a stimulant. Its power as an analgetic is slight.

With regard to phenacetine, says the writer, its freedom from ill effect has been somewhat justified by experiments; nevertheless, we may meet with unpleasant and profuse diaphoresis, rendering its habitual use in phthisis and typhoid fever undesirable. Collapse and exhaustion are not unknown even after moderate doses, while palpitation and oppression of breathing followed by nausea and vomiting have also been observed. Cutaneous eruptions, chiefly urticarial, prevail with a frequency scarcely inferior to that observed in the employment ef antipyrine, and cyanosis of the face, due to changes in the hemoglobin, may be seen in a similar degree. Its use as an antipyretic remains small, as its power in that respect is not equal to that of the others, except when it is employed in doses that very often give rise to toxic symptoms.

The important question of impurity and adulteration should not be lost sight of in considering the ill effects of any drug. Many of the toxic symptoms of acetanilide so closely resemble those of aniline poisoning as to suggest the production of that substance in the blood. There is a close relationship between the two bodies, and there is therefore some ground to suspect the occasional presence of aniline in samples. Phenacetine may be adulterated with phenetidine, a poisonous substances which, in small doses, brings on kidney trouble.

The question of antipyresis hinges lagely upon the important fact that a persistence of high temperature implies serious consequences to the heart muscle; on the other hand, we gather from clinical evidence that a fall in pyrexia is followed by marked relief of the patient's general condition. An ideal antipyretic, according to Liebermeister, says the writer, would be one that limited the production of heat, and it is alleged for the antipyrine group that such is their action, "repressing thermogenesis and simultaneously rendering heat dissipation more efficient." Gottlieb urges that an antipyretic of the antipyrine group should be given when it is desirable to procure a reduction of high temperature rapidly and safely, and to reserve quinine (which he holds, lessens heat production and is a true antipyretic) for a more prolonged administration To some extent, says the writer, the therapeutical application runs upon the lines of this generalization, for quinine continues to be the febrifuge most favored in the hectic state, and antipyrine and acetanilide may be reserved for sudden accessions of temperatue of short duration. The prevalence of heart failure among the ill effects of the antipyrine group enjoins the necessity of caution where the cardiac organ suffers. The study of the ill effects of drugs is of great importance to therapeutics, and much can be done in the way of prophylaxis if they are kept prominently in view. Perhaps in the future they will recive increased attention, and something may be done to establish the employment of antipyretics on a more defiite basis.—*N. Y. Medical Journal.*

SURGERY.

Indications and Limits of Topical Treatment in Laryngeal Phthisis.—Concerning local treatment in this condition, the author says:

"With regard to the qustion of the best form of local treatment, I have nothing very new to say, except to protest against a too common idea that curettement is an absolute sine quanon. Whether in the acute or chronic form, I believe menthol, or menthol iodol, in the form of a spray, gives the best results in the pre-ulcerative stage by promoting resolution in the case of a local hyperemia, and by stimulating the capillary circulation in that of anemia. It is in the anemic form that deposit in the inter arytenoid region is most common, leading to more or less sessile new growth in that situation, and atomized inhalations of the nature described are useful in preventing this development. When there is excessive pain I employ in a spray an ethereal solution of aristol, but morphia insufflations I have never advocated, except in hopeless cases, believing this drug to have an equally pernicious constitutional effect as if administered internally on general principles; but codeia I prescribe largely. Nor do I advise the use of cocaine, except as a preliminary to intra-laryngeal curetting or friction with lactic acid; the drug to be discontinued on the first evidence of improvement under this more active treatment. I have also employed it in advanced cases for the temporary relief of dysphagia.

"I have never been an advocate of intra-laryngeal insufflations of powders, and I cannot but think that all remedies are better administered in the form of solutions, and for the most part as sprays under high pressure.

"The only exception I make to this method of treatment by sprays is in the aplication of an anodyne I have long employed, composed of compound tincture of benzoin, compound tincture of camphor, and tincture of belladonna, with which the yolk of an egg is mixed,

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for the relief of acute dysphagia, the mixture to be employed as a paint immediately before taking food; and in the use of lactic acid, in the application of which all are agreed that considerable force in rubbing the part is required; previous to ulceration, however, this method of application, as well as the drug itself is productive of harm rather than good.

"As a rule, curetting, whether of hyperplastic outgrowths or of ulcerations, is necessary before the lactic acid application is ever realy effective, but it is by no means indispensable to perform a scraping on every occaassion when this agent is used, one in every four or six being in my judgment sufficiently frequent.

"Curetting is indicated in my practice for two purposes:

"1. For the removal of hyperplasia; and I may say that it is very rarely that I employ any other method, even when these excrescences simulate a pedunculated neoplasm.

"2. To clear away necrotic matter when the ulcers are large, and for uniting the numerous ulcerative points into one surface when they are, as is generally the case, multiple."—Lenox Browne, *Jour. Laryngol; Am Med. Surg.-Bull.*.

NOTES AND ITEMS

Expressions of Pain as Evidence.—It is well settled, declares the Appellate Court of Indiana in the case of Anderson vs. Citizens' Street Railway Co., decided Nov. 27, 1894, that whenever the bodily or mental feelings of a person are material to be proven, the usual expressions of such feelings made at the time are original evidence. The statements or representations of a sick person of the nature and effect of a malady or injury under which he is laboring, or expressions of existing pain, it therefore holds, are admissible as original evidence; and this is so whether they be made to a medical attendant or other person.

The Andrometer of Sir William Jones.—

AGE.

1. Ideas received through the senses.
   Speaking and pronunciation.
   Letters and spelling.
   Ideas retained in the memory.
5. Reading and repeating.
   Grammar of his own language.
   Memory exercised.
   Moral and religious lessons.
   Natural history and experiments.
10. Dancing, music, drawing and exercises.
    History of his own country.
    Latin.
    Greek.
    French and Italian.
15. Translations.
    Composition in prose and verse.
    Rhetoric and declamation.
    History and law.
    Logic and mathematics.
20. Rhetorical exercises.
    Philosophy and politics.
    Composition in his own language.
    Declamations continued.
    Ancient orators studied.
25. Travel and conversation.
    Speeches at the bar or in parliament.
    State affairs.
    Historical studies continued.
    Law and eloquence.
30. Public life.
    Private and social virtues.
    Habits of eloquence improved.
    Philosophy resumed at leisure.
    Orations published.
35. Exertions in State and parliament.
    Civil knowledge mature.
    Eloquence perfect.
    National rights defended.
    The learned protected.
40. The virtuous assisted.
    Compositions published.
    Science improved.
    Parliamentary affairs.
    Laws enacted and supported.
45. Fine arts patronized.
    Government of his family.
    Education of his children.
    Vigilance as a magistrate.
    Firmness as a patriot.
50. Virtue as a citizen.
    Historical works.
    Oratorical works.
    Philosophical works.
    Political works.
55. Mathematical works.
    Continuation of former pursuits.
60. Fruits of his labor enjoyed.
    A glorious retirement.
    An amiable family.
    Universal respect.
65. Consciousness of a virtuous life.
    Perfection of earthly happiness.
70. Preparation for eternity.

The foregoing was the plan of Sir William Jones for the life of an English gentlemen. With some variations it may be taken for any gentleman of another profession than that of law.—*Jour. Am. Med. Ass'n.*

Alfred L. Loomis, M.D., of New York, died Jan. 23, 1895. Professor Loomis had been ill since the previous Sunday with acute pneumonia. Was born in Bennington, Vt., 63 years ago, and was graduated from Union College in 1851 and from the College of

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Physicians and Surgeons in 1853. After his final graduation he served for two years as a member of the medical s aff of the Ward's and Blackwell Islands hospitals. Then he engaged in private practice and soon became a recognized authority on pulmonary diseases. He became the visiting surgeon at several hospitals and public institutions. From 1862 to 1865, inclusive, he was a lecturer in the College of Physicians and Surgeons, after which he was made Professor in Medicine of the University of the City of New York. In 1867 he was made a Professor of Pathology of the same institution. Through an admirer he was placed in charge of a fund of $100,000 with which to build a laboratory in the same university, to be named after himself.

Dr. Loomis became a member of many medical societies and associations, and at his death he held a number of honorary degrees which had been conferred upon him. He was the author of a number of medical works, and may be said to have been one of the most popular physicians in the great city.

Dr. Loomis was twice married. Two children and a widow survive him. The funeral was held at the Church of the Incarnation at Madison Avenue and 35th Street, on Saturday, January 26.

Cologne Tippling.—According to *L'Union Medicale* this habit is increasing. Alcoholics, especially women, begin by taking a few drops of *eau de cologne* and finally drink it by the glass. The writer seems to think this form of alcoholism may replace or cure the cocain and morphin habits. The habit is exceedingly injurious, for in addition to the poorly rectified alcohols are the natural or artificial essential oils which are equally toxic. The practice is found among the upper classes principally.

Immunity to Tetanus Induced by Establishing Strychina Tolerance.—Rummo, the Italian investigator, has recently shown that strychnia, which produces physiological effects very similar to those of tetanus, may be used as a means of establishing immunity in guinea-pigs against infection of tetanus. After establishing a moderate degree of tolerance to strychnia, guinea-pigs were injected with with tetanus culture, which was found to be ineffective in most cases, only slightly operative in others, while the controls all died.—*Modern Medicine.*

A Means of Preserving Urine for Analysis.—It occasionally happens that the busy practitioner is obliged to defer analysis of a specimen of urine until decomposition has rendered it valueless for his purpose. Dr. Huguet, professor at the Medical School of Clermont-Ferrand, states that urine can be kept for an indefinite period if to the contents of the vessel there be added 2 c.c. of the following solution: Mercuric cyanide, 10 grammes; water, 100 grammes. The addition of this salt does not alter the acidity of the urine, nor does it invalidate the results of the analysis. Chloral, which is often used to preserve urine, is said to interfere with the ordinary sugar tests.—*Med. Record.*

May Give Opinions as to Cause of Disease.—The rule is well established that an expert witness, is giving his opinion, must first state all the facts upon which he bases his opinion. But after a physician has testified fully as to examinations he has made of a patient, the condition in which he found the latter, detailing also to the jury what he learned from the patient, the Appellate Court of Indiana, in Louisville, N. A. & C. R'y Co. v. Holsapple, a case decided Nov. 22, 1894, holds that the witness may give his opinion of the cause of the patient's maladies, as for example what caused an unnatural growth in her womb. So also does the court hold that where a medical expert has testified fully as to the examinations made by him, he may state whether, in his opinion, the injuries as he found them are temporary or permanent.—*Jour. Am. Med. Ass'n.*

Tellurium in Bismuth Salts.—P. Janzen calls attention (*Apoth. Zeit.*) to the frequent presence of tellurium in bismuth salts, which, with Bettendorff's test for arsenic, may lead to erroneous conclusions. While the possible presence of tellurium or selenium is well understood, yet not one Pharmacopeia has introduced tests for their detection. Commenting on Perleberg's communication the *Pharmaceutishe Rundschau* reminds its readers that the alliaceous bismuth breath is referred to, and ascribed to arsenic or tellurium by Hansen in Liebig and Woehler's "Annalen" for 1853, by Woehler and Gmelin before that date, in Blyth's "Chemistry" of 1879, by Squibb in "Ephemeris" for 1883, and others. While it is not known that the presence of minimal quantities of tellurium is injurious, the writer of this knows from experience that it is decidedly unpleasant, since for years he has been accused by acquaintances of having indulged in the strong-flavored garlic every time he had taken bismuth subnitrate for longer than one day — *Western Druggist*

The "Weekly Medical Review" Pocket Reference Book and Visiting List; Perpetual 1895 (J. H. Chambers & Co., Publishers) price 75 cents, contains information that can be found in no other. Twenty-four pages are devoted to a compilation of facts, some of which we often need in emergencies. Hence its value as a constant companion.—*Miss. Med. Monthly.*

Diphtheria Culture-Tubes—Antitoxine.—Holekamp, Grady & Moore Instrument Company are prepared to supply Culture-Tubes for the diagnosis of diphtheria in suspected cases, and telegraph result of examination in twelve hours after tube has been returned to them. Also, to supply ANTITOXINE, "BEHRING," in either, No. 1=600, No. 2=1,000, or No. 3=1500, immunizing units' strength.

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Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Observations on the Abdominal Viscera in Seventeen Autopsies.

BY BYRON ROBINSON, CHICAGO,

Professor of Gynecology in Chicago Post-Graduate School.

[CONTINUED].

The fossa doudeno jejunalis existed in the fourteen cases out of seventeen. If the transverse colon is thrown upward and the small intestines pulled to the right one can generally see at the beginning of the jejunum and ending of the duodenum a little pouch made of folds of peritoneum. In examining cadavers at random I supposed this little pouch occurred in about sixty per cent of subjects, but recording observation I notice fourteen of seventeen autopsies show a marked fossa duodeno-jejunalis. Two cases presented two little pouches each. One case presented no pouch in the usual spot, *i.e*, at the junction of the duodenum and jejunum, but a distinct pouch was found an inch to the left, distinctly produced by the inferior mesenteric vein covered by a fold of peritoneum. It is not easy to decide whether this little fossa is produced by a fold of peritoneum projecting over the inferior mesenteric vein or by the dragging of the jejunum and duodenum on the peritoneum. The fossa is of no particular interest, does not seem to be connected with internal hernia nor any other pathological condition demanding attention. The fossa generally admitted the tip of the index or little finger to the first joint. There is no regular order of the coils of the small intestines. Two coils may touch each other and yet be several feet apart. In the majority of cases the small intestines are arranged in an irregularly curved manner, along the left side. The chief coils lie on the left side just above the pelvis and partly below. For several years while dissecting bodies I have noted the position of the small intestines for the purpose of estimating the damage done by gun-shot wounds. I shot some sixty dogs in various ways to test where the bullet would make the greatest or least number of holes in the bowels. A comparison of man and dogs gives almost identical conclusions. If a man be shot in the left iliac region he is liable to numerous perforations due to the bunching of the coils of the small intestines. One can not localize points of the small intestines. I have found coils of small intestines touching each other, but when they were drawn out the said points would be many feet apart.

Frequently between the ascending colon and backbone there is a fossa which is filled by the V-shaped coils of the colon or the several coils of the small bowel, but I never discover any order about which distinct portions of the small gut it was liable to be. It may have some relation to the method of atrophy of the liver. For, in children the liver is so large that it forces the coils of the small intestines to the left. However, in a vast majority of bodies which I have examined the bulk of the small intestines lay to the left of the median line of the body. One will be surprised to find so many coils of small intestines in the pelvis. Of course if the mesentery be normally short the coils only go to the pelvic brim, but I find the mesentery so frequently elongated in adults (elderly) that one can not depend on a normally short intestinal support. Much depends on the length of the mesentery and the length of the bowel. With a bowel twenty eight feet long and a mesentery ten inches long a complicated coiling is necessary to dispose of the intestine. With long mesentery the coils are apt to lie expecially in the pelvis and on the right side of the vertebral column. What determines the organs which lie in the pelvis? To settle this question we must not only consider the organs lying in the pelvis, but their function:

1. The first organ which determines what other organs shall lie in the pelvis is the size of the rectum. In one autopsy I saw it so full of feces that it lifted the uterus up to the level of the pelvic brim and it was taken for a myoma of the uterus. The tumor, which was simply fecal accumulation in the rectum, was about the size of a man's head and it completely filled the pelvis. In this case, then, the size of the rectum determined that no other organ could lie in the pelvis.

2. The size of the bladder also determines what organs should lie in the pelvis. Dr. Waite and myself made some experiments on cadavers by inflating the bladder. It was found that by filling the bladder that it would force the uterus down into the cul-de-sac of Douglas and elevate the viscera above it and that the

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bladder filled would almost fill all the lower part of the pelvis.

3. It need scarcely be noted that the pregnant or myomatous uterus by its size can decidedly force every other organ out of the pelvis.

4. A series of autopsies can easily demonstrate that the sigmoid flexure may occupy the whole pelvis, excluding all but itself.

5. Distended tubes and ovaries may exclude other viscera (pathologic).

6. Occasionally the cecum almost fills the pelvis.

7. Finally the coils of the small intestines fill the pelvis frequently to the exclusion of other viscera. The large sigmoid and wide cecum may both float above the pelvis, which is occupied by ten to twenty feet of small bowel. Now, the part of small bowel which lies in the pelvis must be such as has a long mesentery. We made many measurements of the length of the mesentery at various points of the small gut, and as a general statement it may be said that the *second* five feet of the small intestines has the longest mesentery. This also almost agrees with Treves' measurements of one hundred cases. Yet I note that in most cases where such a vast amount of coils of small gut occupy the pelvis, that the mesentery is elongated and the viscera are prolapsed. When the viscera shows distinct prolapse as they do so often in females the whole lower ilium lies in the pelvis and in one case I found the lower two feet of the ilium herniated through the femoral ring. It is of interest to know what coils of intestines may lie in the pelvis because it is such that will suffer from pelvic inflammation and hernia and maybe from appendicular inflammation It is of intense interest to the gynecologist as I think future tubes and ovaries will be more and more removed through the vagina and besides the uterus itself will in the future be more and more sacrificed when its appendages are removed. Now, when inflammation arises in the pelvis it is apt to make adhesions between tubes, ovaries and uterus. I have seen dense adhesions in my own operations between the small intestines and the uterus, tubes and ovaries, while I operated through the abdominal wall, but when we operate through the vagina more and more as we will, we should be on guard against emergencies.

In our autopsies on infants the pelvis was found unoccupied by the organs of adult life. One is apt to find the enormous sigmoid of the early infant occupying the pelvis, even the bladder is above the pelvis and the uterus itself is pushed above the brim. But as the bones widen the organs, uterus, bladder and other viscera gradually descend into the pelvic basin. Even the U-shaped bend of the transverse colon may lie in the pelvis in some adults. The small intestine is a strikingly variable organ, in (*a*) its length (varies half its normal length); (*b*) its mesentery (viz. one-half its normal length); (*c*) its size; (*d*) its position; (*e*) irregularity of its loops. Adhesions of the small intestines generally occur at the great landmarks of peritonitis, viz: (*a*) in the pelvis (at the mouth of the tubes); (*b*) the appendicular region; (*c*) at the hernial orifices and (*d*) at the psoas when the sigmoid crosses it. The surgical localizing landmarks for the small intestines is not the direction of the mesentery, but the cecum, from which point one can trace with a certainty points on the small bowel. Try it.

The stomach did not engage any special attention as to the exact measurements in the seventeen autopsies but it was observed in general. In ten out of seventeen cases the stomach lay external to the left of the median line. In three cases it was widely dilated and prolapsed. In two cases it was much prolapsed. In one case not of the seventeen, Dr. Waite and myself found the stomach reaching into the pelvis. It extended three inches below the iliac crest by exact measurements. The pylorus was normal and not obstructed. The subject was about sixty-five years old. The other viscera were also prolapsed, but the dilation of the stomach to such an enormous degree could not be accounted for. The stomach measured ten inches from cardiac to pyloric orifices and seven inches across, but its walls were so much distended that it would hold perhaps six quarts of fluid. For several years I have noted the position of the stomach in humans of all ages. Many years ago Dr. Luschka asserted the normal position of the stomach verticle in the body and later Dr. Lesshaft examined twelve hundred bodies and makes practically the same assertion. We all know that the stomach is almost verticle in infants. But it also is an anatomical fact, notwithstanding the opposing views of Professor Luschka and Lesshaft with enormous material at their hand that the stomach in the adult human lies obliquely in the abdominal cavity. I can vouch safely for over two hundred observations that the stomach was obliquely situated in each case. I am surprised in the exactly recorded notes to find ten out of seventeen stomachs lying entirely to the left of the medium line. Many of these lay in the left cavity exactly where the spleen should lay and the spleen lay outward and upward. In many elderly adult bodies one is surprised to find the liver so extensively over-riding the stomach. In such cases the liver is perhaps more prolapsed or enlarged than the stomach. In a certain sense Lesshaft and Luschka are right in regard to the vertical position of the stomach. In some cases the liver pushes the pylorus just to the left of the median line or in other words the dragging of the rapidly atrophying infant liver never pulled the pylorus very far to the right and in this way the stomach is in reality vertical from esophageal entrance to pylorus—both orifices being just to the left of the vertebral column. When the stomach is empty it lies well back in the abdomen and very much under the liver, in fact well protected. When, however, it became fully distended its greater curvature bulges and vaults distinctly forward against the anterior abdominal wall and can then be easily wounded. When the stomach is well distended it forces the pylorus several inches to the right because the stomach endeavors to gain the middle line, *i. e.*, to distend in the direction of least resistance.

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The matter can be observed in opening a cadaver whose stomach is widely distended with gas, the stomach rapidly comes forward in the median opening. The reason that wounds of the stomach are not so dangerous as wounds of the small bowel is on account of the loos ness of the inner coat with regard to the outer. The mucous coat is so loose that when one cuts through the muscular, serous and mucous coats immediately falls into the wound and closes it up. I have shot a thirty two caliber bullet through the stomach of a thirty pound dog and in five days he would be eating and playing. Later Dr. Miller and myself killed and did a post mortem on the dog and we could scarcely find the mark of the bullet. The scar had closed over it and so far as could be seen no old peritonitic adhesions existed, showing that the mucous coat had so completely closed the bul let-wound that it had allowed no leakage. It is not generally so fortunate when the stomach is full, as the mucous plug has not the opportunity to act.

The pylorus was situated to the left of the median line in three cases, to the right of the median line in three cases, exactly in the median line in two cases. It was distinctly prolapsed in four cases It was very much hardened and thickened in three cases. So far as I am able to determine it is the narrowest part of the digestive tract. The pylorus is a sphincter, has a high function, a periodic blood supply, a complicated apparatus and peri odic function. It is liable like other sphincters to malig nant disease as well as accumulations of cicatrical tis sue. The pylorus is man's first physiologic anus and, like the other two ani, it is subject to similar disease. The extirpation of the pylorus from its partition and anatomical surroundings is a formidable operation. Billroth performed it and I have known him to tie the protal vein as the autopsy proved, with advanced cancer it is hardly justifiable. Anastomisis with the author's segmented rubber plates from the stomach to the jejun um has given splendid results in my hand in both dogs and humans. It alleviates pain, checks vomiting and courts sleep and hope, enhances assimilation, limits the blood supply to the new growths and stops the irritation of the growth by allowing food to stimulate its growth by passing over it.

The gall bladder was found with distinct peritonitic adhesions around it in seven cases out of seventeen. Over forty per cent of the adult autopsies presented old peritonitis around the gall-bladder. This is what I call a major region of peritonitis. It is one of the three great peritonitic districts. In another series of twenty-two autopsies on adult females Dr. Lucy Waite and myself found over fifty per cent of old peritonitic adhesions in the region of the gall bladder. So that in adults one can expect to find forty five per cent of cases to show traces of peritonitis around the gall bladder. In two cases out of seventeen the gall bladder was found in a very distinct fold of peritoneum. In such cases a wide fold of peritoneum extended from the colon to the gall bladder and then on to the liver. The gall-bladder lay between the fold of peritoneum just as the transverse colon does in the omentum. This condition gave the gall bladder a mesentery on each side beside large mobility. It may be of interest to those who do abdominal work to note that the gall duct opens into the duodenum about four inches below the pylorus and that in obstruction to the common bile-duct and introduction of the Murphy button it should be put several inches below the pylorus for the bile might flow back into the stomach. But the button should not be used in cases which have no obstruction of the common bile-duct as that only makes a second artificial passage between the gut and the gall-bladder—poor at best. Dr. Waite and myself obtained a specimen from one subject where long ago a stone had passed through the gall-bladder wall and duodenal wall into the degestive track. There still remained a small passage from the gut lumen to the gall bladder through which a probe passed. In this case the opening into the gall-bladder was closed so that the gall fluid passed from the liver directly into the bowel. She had no reservoir for bile. This shows that the gall bladder can be dispensed with during life without manifest disturbance.

The spleen was observed only in some ten cases, and out of those ten cases three presented very distinct perisplenitis. It is remarkable how many old peritonitic adhesions are found in autopsies around the spleen. I would account for this splenitis from three causes, viz:

(*a*) The spleen lies close upon the splenic flexure of the colon. The splenic flexure of the colon is liable to considerable inflammation from its acute angle and consequent abrasion of its mucous membrane from sharp, rough foreign bodies passing around it. The bacteria or their products extend beyond the point of irritation and attack the spleen—a chemical peritonitis.

(*b*) The spleen lies on the diaphragm in close proximity to the pleura where the diplococcus of pneumonia is apt to exist and pleuritis and peritonitis are so closely allied and associate that the existence of one is generally accompanied by the other by passage from one to the other.

(*c*) If any irritation did occur around the spleen as, *e. g*, an exudate, the dilation and contraction of the stomach keeps up the inflammation, as well as the continuation of the motion of the diaphragm. The damage to the patient of perisplenitis is not yet estimated.

The mesentery is a double fold of peritoneum which supports the small intestines. The longest mesentery in seventeen cases was twelve inches. The shortest was five inches. The average was about six inches. Sixteen caseses out of seventeen had mesenteries long enough to allow a loop of gut to be drawn through either femoral or inguinal rings. One case allowed the bowel loop to be drawn three inches beyond the hernial orifice. I used to think with Treves that a normal adult cadaver would not allow a loop of bowel to be drawn through the hernial orifices, but later examinations of large numbers of cadavers has made me doubt the assertion. The use of the mesentery is (*a*) to keep

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the viscera from being entangled, to keep definite relations between organs; (*b*) to transmit blood lymph vessels and nerves; (*c*) it acts as a physiological instrument for the viscera, as well as a mechanical support for the viscera. The various folds of peritoneum which give support, physiologic protection and transmit nourishing and nerve channels to the viscera are of three kinds.

Peritioneal folds:

(*a*) Mesentery.
(*b*) Omentum.
(*c*) Ligament.

In regard to the mesentery, we noted that early in embryonic life the digestive tube simply reached from mouth to anus, and that it hung from the dorsum by a simple double fold of peritoneum—the primitive mesentery. Now, it may be remembered that all mesentery except the primitive is acquired. Early in fetal life between the duodenum and trunk, beyond where the appendix springs out a great loop of intestine is developed. The superior mesenteric artery feeds this loop and the vosa-intestine tennis goes off toward the right. In a short time the appendix appears as a bud on the extreme top of this loop, and the whole loop makes a half rotation on itself from right to left. This half tine of the loop draws the duodenum across the back-bone and makes vosa-intestine tennis go off toward the left side as it does in adult life. This turns the future cecum toward the left also. Now, what was the *right* side of the mesentery has become the *left* and the *left* the *right*. The cecum now ascends on the left side and crosses the abdomen to the liver where it gradually descends to its home in the right iliac fossa. By noticing the length of the great loop supplied by the sub-mesenteric artery, one can form an idea of what part of the digestive tract has acquired mesentery for the old primitive mesentery is that part of the colon supplied by the inferior mesenteric artery, *i. e.*, from the middle of the transverse colon to the anus. The other primitive mesentery is that supplying the duodenum. Now, the great loop starts at the duodenum and middle of the transverse colon which may be called the neck of the loop. The duodenum and the middle of the transverse colon which form the neck are never altered in their relations to each other. The part of the primitive mesentery which holds to the duodenum is much altered by the change in size and dragging of the liver. But the chief primitive mesentery left is that on the left half of the transverse colon and on the descending colon. In adults the mesentery of the descending colon is pushed toward the left side. Hence the mesentery of the small intestine, of the right half of the colon and ascending colon as well acquired. Acquired mesentery is very variable. The bony landmark of the mesentery are from the second lumbar vertebræ to the sacro-iliac joint. The soft landmarks are the end of the duodenum and the entrance of the ilium. The mesentery passes obliquely across the back-bone and the great vessels. In old people the mesentery may be dragged down one or two inches as shown in autopsies. The mesentery of the small intestines leaves about one-eighth of an inch of the gut uncovered. In the seventeen cadavers the longest mesentery measured about twelve inches. The amount of fat and connective tissue between its layers varies very much, especially the fat. The most striking pathology of the mesentery belongs to the glands which vary from the size of a pea up to that of a plum. There are perhaps one hundred and fifty mesenteric glands, and in tubercular subjects they are very large, in some of the tubercular subjects of the seventeen cases they were fully as large as a plum. One frequently finds old cicatricial scars in the mesentery which are likely the remnants of suppurating glands. In some cases the mesentery shortened so much that it held the gut against the back bone, due to gradual shrinkage of the peritoneum.

[TO BE CONCLUDED.]

On Certain Morphologic and Micro-Chemic Peculiarities of the Blood in Diabetes Glycosuria.[1]

BY LUDWIG BREMER, M D., ST. LOUIS, MO.

Read before the St. Louis Medical Society, January 19, 1895.

When we look back on the progress of the medical sciences during the last forty or fifty years and consider the amount of exact and minute information which during that time anatomic investigation has furnished about the tissues of the human body, it seems strange that we are still in the dark about the anatomy, both normal and pathologic, of that tissue upon which all the others depend—the blood. Hematology has been the most neglected of all the branches of medicine. Possibly this neglect has been due to the prevailing trend of our science during the past four or five decades; a trend which eschewed humoral pathology and, so to say, looked with contempt upon the blood.

It is only of late, say in the last fifteen years, that the interest in this most important, because life sustaining, tissue, has been revived. A powerful impetus in this direction was given by the discovery of the plasmodium malariæ which, in its turn, was the result of the bacteriologic tendencies of modern medicine. The methods invented for the study of bacteria were applied to that of the blood, but principally for the purpose of finding and demonstrating the pathogenic microbes coursing in the circulation. The changes which those micro-organisms might produce on the cellular elements of the blood did not seem to enter into consideration on the part of investigators.

With the discovery of the plasmodium malariæ the attention of the pathologist was once more directed to the much neglected and almost entirely disregarded red blood corpuscle, in which the parasite named is found

[1] Based on an article published by me in the Centralbl. f. d. Med. Wiss., 1894, No. 49.

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in cases of malarial fevers. Ehrlich's demonstration of the various granulations of the several kinds of white blood cells, was another stepping stone on the road to substantial progress, at least so far as the histology of the blood in the normal state is concerned.

At the present time it may be said the most rudimentary methods of blood investigation still prevail, and beyond the counting of the white and red blood corpuscles, the determining of their relative numbers, the demonstration of the specific granulations, and of the amount of hemoglobin, very little is known. The changes of the red blood corpuscle in anemia, poikilo- and micro-cytosis, are also very incompletely known, owing principally to the fact that our knowledge of the normal histology of the red blood corpuscle, which in the course of this article I shall for brevity's sake call erythrocyte, is extremely defective.

For a number of years I have been engaged in the study of the corpuscular elements of the blood in health and disease; the results of these investigations, constituting in my opinion an attempt, though possibly a feeble one, at a systematic pathologic anatomy of the blood, I shall publish at no distant day. One of the results of my work on this subject I take the liberty of laying before your Society to-night. It is an observation which I have made on certain morphologic and micro-chemic properties of the blood in diabetes and glycosuria.

It is hardly necessary to state my contribution to the knowledge of a disease like diabetes, which has been studied so much and explored so little, so far as tangible results are concerned, must be a welcome addition to the stock of our knowledge. It is also plain that even the smallest step in the direction of ascertaining the nature of so obscure a disease, may become one of the stations which are constructed along the road leading to the goal of medical study, the cure of the disease.

It is well known that the blood in the pathologic state contains a certain percentage of sugar, that its amount varies between 0.1 and 0.5 per cent, and that 0.1 is probably the average percentage in normal blood. Traces of it, as is also well known, occur in the urine of healthy persons, but are not demonstrable with the usual chemic tests, say Fleming's and Nylander's. A positive result with these reagents excites at once a suspicion of metabolic disturbance of the individual from whom the urine has been obtained. Now, the essence of my discovery lies in the fact, that, whenever sugar can be demonstrated by the usual methods, either the ordinary chemic tests, or by the polariscope, or by fermentation, there is a distinct and characteristic color reaction of the erythrocytes on the application of a micro-chemic test by a combination of certain aniline colors. The method which I have employed for this and other purposes is as follows:

Two aqueous solutions of eosin and methylene blue are made, viz, twenty-four to twenty-eight drops of a one-half per cent solution of eosin are added to two drachms of a saturated solution of methylene blue. With those proportions the neutral boundary is approximately obtained, where the reaction is neutral, neither acid (eosinophilous), nor alkaline (methylene blue reaction). This neutral point is determined by dipping a small piece of white filtering paper into the solution. There is, when exact neutral reaction exists, scarcely any coloring of the paper slip, at most a very faint grayish-blue tint. To one-half of this solution in a watch glass a drop or a fraction of a drop of the one-half solution is added, just enough to show a decided preponderance of the eosin stain recognizable by the red color of the paper slip; to the other half one or more drops of the saturated methylene blue solution are added, enough to stain a paper slip distinctly blue. A drawback to these solutions is the precipitation of crystals, which form a scum on the surface of the solution. This scum is easily removed by passing the smoothly cut edge of a piece of filtering paper over it. The crystals are thus moved to the periphery or cling to the filtering paper, and the surface of the solution becomes absolutely clear.

Cover glass preparations of blood must be in readiness. These preparations are made after Koch-Ehrlich's method. A drop of blood is spread on a cover glass in the usual manner, forming a very thick layer, so that the individual blood corpuscles are separated from each other.[2] The cover glass preparations are heated for about two hours at a temperature of 120 to 125° C., preferably in a copper heating apparatus. After this the preparation is floated for about three minutes on the solution containing eosin in excess; next it is similarly treated with the solution having the excess of methylene blue. Having been dried, the preparation is imbedded in damar or balsam in the usual manner. Specimens thus treated show the following peculiarities in normal blood:

All the erythrocytes assume a reddish-brown (maroon) tint, which is more or less sharply divided from the colorless central area (depression).

The intensity of the stain varies in the different specimens derived from different individuals between a light reddish-brown and a deep chestnut brown, almost black-brown. Different states of the blood show different color reactions of the erythrocytes. The variation in the same individual at different days is sometimes very striking. Still more striking is the difference in color of the blood of different individuals.

The blood platelets (Bizzozero's corpuscles) too, are plainly stained with this method. In another publication (*Centralfl. f. d. Med. Wiss.*, 1895, No. 20), I have shown these, the so-called third corpuscular elements of the blood, to be nothing else than the products of physiologic decay of the erythrocytes. Often they can be seen in the act of expulsion from the erythrocytes, only a part of them protruding. Their color varies between

[2] A far superior method of spreading blood for the purpose of histologic and pathologic study, I shall publish shortly at another place.

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decided rich, deep blue and violet. They are always more or less basophilous, showing affinity for the methylene blue.

The nuclei of the leucocytes are stained pure blue; the intra-nuclear network shows often very plainly. All epsilon granulations (Ehrlich's) present themselves in a violet stain. The granulations of the alpha cells are of a bright red color. Slightly basophilous (methylenophilous) are the nuclei of the medium sized lymphocytes, the protoplasm of which is generally stained blue and contains basophilous (blue) granulations. Finally, the excellent lymphocytes have intensely blue nuclei and only a slightly blue protoplasmic margin.

The great advantage of this method consists in this, that the blood-plasma, too, assumes distinct and definite hues, according to its chemical constitution. Generally its reaction is slightly neutrophilous; often, however, it is of a deep reddish-brown stain, due, no doubt, to the exudation of the hemoglobin from the erythrocytes. This exudation or effusion is the result of the drying and shrinking of the protoplasm of the red blood corpuscle or disko-plasma.

Among the many changes alluded to above, about the nature of which I am still in the dark, that observed in diabetes is most characteristic and striking. It consists in the complete loss of the eosinophilin of the erythro cytes. This loss is demonstrable in the blood of all persons in whose urine sugar can be shown to occur by the ordinary tests.

In all instances which have come under my observation so far, comprising cases of typical diabetes as well as glycosuria of a more or less transitory character, the just mentioned staining peculiarity could be shown to exist. So exact and certain is this reaction, that on various occasions, in fact, in the majority of the cases examined, I was enabled to predict sugar in the urine, even in persons where not the slightest suspicion of glycosuria existed.

In such preparations the erythrocytes either remain entirely unstained, or they are of a slightly yellow or greenish-yellow tinge. Rarely is there a narrow peri pheral zone of the erythrocyte stained red (eosinophil ous). The plasma, too, remains colorless or is at most slightly rose colored, or of bluish or neutral tint, a proof that it is not the loss of the hemoglobin, which causes the lack of coloration of the erythrocytes, but that a chemical change has taken place in the diskoplasm.

Together with this anomaly of color reaction in the erythrocytes there are certain changes in the granulation of the lymphocytes and in the products of disintegration of the erythrocytes, *i. e.*, the blood platelets. A description of these changes (of the platelets) I reserve for another publication.

Again, in a l of the cases of diabetes and glycosuria examined by me up to the present time, there is another peculiarity demonstrable, quite characteristic (at any rate, so far as quantity is concerned) of diabetic and glycosuric blood. It consists of super-abundance of white and generally globular, sometimes angular, bodies of varying sizes. They seem to be of the same chemical nature and morphologic appearance as the minute unstainable granules which are found in the blood of healthy individuals and which by some have been called-elementary granules. None of the known coloring agents will stain them. As to their nature and origin, they are necrotic substances derived from decaying erythrocytes (their products of decay being the platelets) leuko- and lymphocytes. The amount and the individual size of these granules is so large in some specimens of diabetic blood that the plasma appears more or less coarsely granulated.

They are plainly enough demonstrated by the staining method described above, but the pictures obtained with Gram method are much more striking. In some cases these necrotic masses seem to preponderate over the plasma, a fact, which possibly explains, or, at all events, renders intelligible the nervous and general symptoms of diabetes and glycosuria. Another peculiarity quite characteristic of this kind of blood in question, is a very clear, sharply defined, narrow, white zone surrounding the nuclei of the white blood corpuscle (leuko and lymphocytes and alpha cells). They often describe all sorts of curves around the nuclei, a frequent occurring curve is the C form. I take these white contours to be indications of limited necrosis of the protoplasm of the respective cells. Only in two out of the fifteen cases were the just described peculiarities not demonstrable.

Whether this abundance of the necrotic globules is in connection with the color reaction just described, or whether there exists another characteristic constituent of the sugar blood, causing the reaction, has to be determined by future experiments. Against the former assumption speaks the fact, that the blood in certain cases of nervous cachexia is loaded with white globular masses, being apparently of the same nature with those just treated of, and yet the tinction of the erythrocyte is the normal one.

It is somewhat strange that the erythrocytes of sugar are refractory in their elective affinity only to eosin, whilst other acid anilin dyes (scarlet, aurantia and acid fuchsin) stain them usually.

One might be led to assume that the abnormal amount of sugar in the blood is responsible for the loss of the eosinophilous reaction of the erythrocytes. But a single experiment refutes such an assumption. If a cover glass preparation of normal (non-diabetic or non-glycosuric) blood be treated with a solution of grape sugar, the color reaction is the normal one. If, however, a cover glass preparation, smeared with non-diabetic or non-glycosuric blood, heated in the usual way, be floated for a short time, say twenty five or thirty minutes, on diabetic or glycosuric urine and then stained with the eosin methylene method, the typical reaction sets in; the erythrocytes lose their eosinophilia. They appear slightly greenish-yellow. The counter experiment—treatment with non diabetic urine—is negative.[3] Neither

[3] Arch. f. Exp. Path., Bd. 38, p. 272.

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does urine, to which grape sugar has been added, change the normal stain. I have not succeeded, as yet, in diagnosticating the greater or lesser amount of sugar in the urine from the various degrees of loss of eosinophilia in the erythrocytes. Nor is it possible to diagnose simple or transitory glycosuria from genuine diabetes by their staining method. There seems to be, however, no doubt that the loss of the eosinophilia bears a certain proportion to the percentage of sugar. Likewise, the white granular masses are generally proportionate, both in size and amount, to the gravity of the case. They are apt to remain, in case of glycosuria, when no sugar is demonstrable any more in the urine. Such cases are, in my opinion, in danger of relapse. Finally, there are cases where the reaction is dubious, and where only a suspicion is raised by the appearance of the blood, *i. e.*, where the stain is nearly, but not quite, the typical sugar stain.

In artificially produced glycosuria, by phloroglucin, for instance, with a daily dose of 0 6 administered during three consecutive days, the above mentioned reaction of the erythrocytes could likewise be demonstrated.

The presence, in abundance, of the white granular masses could also be established.

Gabriczewski[4] has claimed that glycogen can be demonstrated in the leucocytes of diabetics. I have not been able to verify this observation.

The material of my investigation is confined, at present, to seventeen cases. Of these, seven are genuine cases of diabetes, seven are patients in whom nervous troubles, generally of a neurasthenic character, exist (one of them traumatic neurasthenia), two present nervous symptoms dependent upon luetic infection; one has struma, but presents no other subjective or objective symptoms. In the great majority of these cases, the presence of sugar in the urine was foretold by the behavior of the erythrocytes towards the eosin methylene blue staining method, and by the presence of the white granular masses, as shown by the Gram method.

[4]Since writing the above I have made another experiment. A drop of a one per cent solution (in physiologic salt solution) of grape sugar is mixed with a drop of fresh blood. In this case the sugar reaction is obtained. The conclusion, therefore, is, that the grape sugar forms a peculiar combination with the hemoglobin in the living erythrocyte. This combination presents the normal stain. When the hemoglobin is fixed, and probably altered by the heating process, such combination can not take place, and the stain is the usual one.

Military Duty and the Professions.—The *Christian Register* says: "Dr. Baxter, examining surgeon during the civil war, in tabulating the results of his examinations, shows that, out of every 1,000 clergymen examined, 954 were unfit for military duty; out of every 1,000 journalists, 740; of physicians, 670; of lawyers, 544; while of farmers only 350 were thus disqualified."

Anti-Tubercle Serum.—The Treatment of Consumption by Sero-Therapy.—Report and Presentation of Cases Treated.—Exhibition of Serum, Etc.

BY PAUL PAQUIN, M.D., ST. LOUIS, MO.

Read before the St. Louis Medical Society, January 26, 1894.

Preliminary Remarks.

It would seem superfluous to say a word here on the pathology of tuberculosis. But the nature of the new treatment demands that we refresh our memory on some points of it before certain therapeutic questions, to be dealt with presently, may appear clear, or at least rational. The results of my observations and researches have convinced me beyond a doubt that tuberculosis, in the stages of lesions, particularly when pulmonary cavities, intestinal ulcers, or such alterations exist, becomes a mixed infection, due to the introduction of various other pathogenic microbes besides the bacillus of tuberculosis in the specific wound. Myriads of germs of the air, water, food, etc., gain access to tuberculous lesions and complicate the primary disease to a very grave degree. The destruction of tissue by these germs, the production of new, mixed poisons, perhaps more dangerous sometimes because of chemical combinations, are largely responsible for the irregular chills, fevers and some other pathognomonic phenomena to be seen in advanced tuberculosis. These complicated microbic disturbances, which so greatly depress and harass the system, are perhaps assisted in their nefarious work by the toxines generated in a weakened digestive tube, which, failing to digest the food properly, leaves it the prey of various toxic-ferment manufacturing microbes. It is well to bear these points in mind when considering the anti-tubercle serum as a therapeutic agent in tuberculosis, for it probably not affects complicating germs.

On the other hand, in tuberculosis, we should never lose sight of the natural vital resistance of the exposed or suffering individual. It is *this vital resistance* of Nature that saves the minority who escape all the damaging influences of the disease, and the principles underlying it explain the serum therapy. To understand this vital resistance, its nature and its scope, and to increase it in medical practice, is to wield a powerful weapon against the foe. The cursory method of diagnosis, therefore, merely by the interpretation of physical signs, is not sufficient to put the doctor in possession of all the important facts necessary for an accurate interpretation of tuberculous phenomena and proper treatment. The microscope should be brought into play early and often, not only to discover the existence or absence of the bacillus of tuberculosis, but also to establish the differential nature and state of the organic lesions as far as possible, and to realize the nature and extent of the mixed infection when it exists.

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Sero-Therapy in Tuberculosis.

I began the serious study of tuberculosis and experimentation in 1889, at the University of the State of Missouri, at Columbia. During my services[1] at that Institution, I had unsurpassed opportunities for studies in comparative pathology and experimental researches Early in my investigations of tuberculosis, I became convinced that the equine species is, to a certain degree, naturally immune to the disease, the ass being less susceptible, possibly, than the horse, although I am by no means convinced of this. Later, following step by step the work of Metchnikoff on the "Theory of Phagocytosis," Kitasato and others on the antiseptic properties of blood serum, I formed the conclusion that the chief and direct basis of immunity was lodged in the blood. When the Japanese scientist just mentioned published that properly immunized blood serum was efficacious to cure tetanus (lock-jaw), revealing by this momentous discovery the great secret of Nature's force in resisting this disease, the light began to dawn in my mind, as in that of every medical man, doubtless, that the prevention and cure of contagions by the use of Nature's own remedy was only a question of time. Not many years after came the welcome announcement that diphtheria was curable by the use of specially immunized blood serum. The press also reports that investigators in Switzerland and France are testing the blood serum of the ass in tuberculosis. Now, I beg to report that by the same principle which underlies the antitoxic serum of Kitasato for tetanus, of Behring and Roux for diphtheria, although the technique of immunization necessarily differs in certain parts, the horse blood serum may be rendered antagonistic to tuberculosis. This I have accomplished in laboratory experiments, and the result obtained in treating consumptives in the first and second stages and the beginning of the third stage indicate, very pointedly, that sero therapy will master this dreadful plague. Indeed, I dared not hope for such universal improvements as were obtained. While in advanced consumption with cavities, or other serious lesions, impairing important organs gravely, I have not yet arrived at a point where I may formulate reliable deductions, I can say that a large per cent of the cases seriously involved increased from five to sixteen pounds in from six to eight weeks, without any tonic and without any specially reconstructive diet, only the regular City Hospital or Poor House fare being admitted; whereas, every witness case in the same ward suffering with the disease in practically the same stages, untreated by blood serum, continued to decline steadily or failed of improvement. The treated cases soon began to sleep better, to cough less, expectorate less, eat with relish, their night sweats diminished, they became more cheerful, encouraged. In a couple of instances at the Poor House cough and expectoration ceased entirely in less than eight weeks, while all the general signs of health reappeared. There is scarcely enough expectoration in these to make microscopic analyses, and the germs are no longer to be found. In all cases of improvements the bacilli of tuberculosis have materially decreased in number. I have also several cases with large cavities which have improved remarkably. I have here to show you some of the worst which we have under treatment, that you may judge for yourself of the nature of the affection and its lesions. These bad cases with marked alterations of lung tissue have gained a number of pounds in weight in less than eight weeks and have improved in every way. Two of these were stretcher cases when brought to the City Hospital. Both had been condemned as hopeless by a number of physicians. One of these, Mr. Cummings, now weighs more than he ever did at his best, when he was perfectly sound and healthy. We have not had any case of any kind under treatment longer than eight weeks, and obviously it is too early for me to express unqualified conclusions, particularly on the serious conditions, which, to be cured, demand that Nature shall build new tissues to fill the gaps. But that sero-therapy will arrest consumption, personally, I feel sanguine. We have, at least, a rational basis for our hopes.

None of the improvements can be ascribed to mental influences, as it was in nearly every case against the will of the patient that we injected them. For four weeks or more, the cases at the City Hospital fought and objected, and it was only after realizing the benefits themselves that they submitted gracefully.

These results certainly point to a decidedly favorable ground to hope for more success. If in such a short time, under such circumstances, and in such surroundings, viz., a Poor House and a City Hospital, one can put flesh on a consumptive, while untreated witness cases, under the same conditions, continually fail, what may we not hope if consumptives in the first and second stages, at least, are placed in a modern sanitarium or kept in their homes even, and surrounded by all the cares that increase good health and the conditions for the rich constructive diet that should be granted such unfortunates? What may we not expect if we give them, furthermore, all the sanitary conditions that may aid Nature to cure or orrest tuberculosis in any event? I do not forget that changes in condition produce increase in weight in tuberculous cases, but the cases under discussion seem to have increased in health out of proportion to the others under similar conditions.

Records of Cases.

Mike Morley, age 53; pulmonary tuberculosis in the second stage Had been ill seven years. Family tuberculous. Left lung affected below the scapula at the back; fullness of the left (?) apex. Chest measurement in expiration 36, inspiration 37½ inches; dilatation of only 1½ inches. Coughed considerably; expectoration

[1]The scientific experiments carried on then and since, both in the laboratory and in the field, including the technique of my method of producing anti-tubercle serum, will form the subject of a special paper. This will contain explanations and results as per records kept. P. P.

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yellowish; blood tinger, sometimes pure blood. Began treatment December 1, 1894; weight, 165 pounds; lung capacity 110 cubic inches of pure air. January 28, weight 170 pounds; lung capacity 110 cubic inches of air. Increase in weight, in about eight weeks, five pounds.

Charles Reck, age 18; began treatment November 29, 1894, discharged January 3, 1885. Was brought to the City Hospital on a stretcher; could barely rise on his chair to eat. Tuberculosis of the lungs in the third stage; duration two years. Cavity in the left intra-clavicular space; expectorated a good deal of blood and sputum. Gained nineteen pounds in a month.

Phil. Hye, age 35; pulmonaay tuberculosis second stage; coughed six years; was very emaciated; dullness in both apices. Chest measurement at expiration, 30 inches, inspiration 31, dilatation of only one inch. Coughed constantly night and day; muco-purulent expectoration. Began treatment December 1; weight, 81 pounds; was sleepless. January 26, weight 89 pounds, an increase of eight pounds in less than eight weeks; cough disappeared almost entirely; sleeps well. This patient was very weak on entering the City Hospital; was sent here from Texas, having been given up as hopeless by Dr. Jestus, City Physician of El Paso, Texas, and Dr. Menger, of San Antonio, Texas, who sent him home to die. He had also been condemned as hopeless by Dr. Cyphers, of Alexian Brothers' Hospital, of Chicago, where he had been under Koch's treatment. The patient is now around and about.

George Dobson, or Dolson, age 28; had been seriously ill two months; pulmonary tuberculosis of the second stage; had had hemorrhages occasionally; dullness in the right apex in infra-clavicular region; expectoration scant. Began treatment December 1; weight at that time 107 pounds; weight January 26, 117½ pounds, a gain of 10½ pounds in less than eight weeks. Lung capacity at the beginning 100 cubic inches of air; lung capacity, January 25, 150 cubic inches.

John Smith, age 23; pulmonary tuberculosis, second stage; duration two years; mother died of consumption. Had lost 30 pounds in two years; affection of the left apex; large cavity; adhesive pericardium and pleura; coughed particularly in the morning. Weight, December 1, 145 pounds; January 26, 154; gain of 9 pounds in less than eight weeks. Lung capacity 170 cubic inches on December 1; lung capacity 180 cubic inches January 25; increase of 19 cubic inches.

Otto Maye, age 58; pulmonary tuberculosis; had been suffering for several years. Appetite poor, coughed considerably, had slight hemorrhages several times in the morning. Weight, at the beginning of the treatment, December 1, 135 pounds; lost flesh gradually until reached 131 pounds on January 1. Is now gaining and has gained 2½ pounds between the 1st and 26th of January. Lung capacity at the beginning of the treatment 110 cubic inches; January 26, 160 cubic inches; increase of 50 cubic inches. This patient is one of those who had an abscess during the process of treatment, during which time he lost in weight without fever. He is now gaining.

Nicholas Robinson, age 61; pulmonary consumption in second stage; duration two and a half years. His mother died of consumption. He had several hemorrhages, night sweats, coughed seriously at nights, expectoration great. Affection located in infra- and supra-clavicular regions both sides, dullness quite marked. Weight at the beginning of the treatment 119 pounds, weight January 26, 131 pounds. Has gained 12½ pounds in less than two months. Lung capacity 150 cubic inches December 1; lung capacity January 26, 180, increase of 30 cubic inches. This patient could not talk when brought to the Hospital; was given up as hopeless. Laryngeal tuberculosis. Was sleepless; now sleeps well; coughs very little; has a good appetite and feels stronger.

John Cummings, age 49. Weight 90 pounds December 1; weight January 26, 106 pounds, a gain of 16 pounds in less than two months. Lung capacity December 1, 100; lung capacity January 26, 110, a gain of 10 cubic inches. This man had hemorrhages all last summer and before that, and was almost bed-fast. Very emaciated; bones almost protruding; the nurse was afraid of bed sores; the case was despaired of; appetite was lost; coughed considerably and expectorated a great deal. Is now improving continually; is up and about and able to go up and down stairs, and feels in better health in every way. (Is cured of a persistent constipation).

John Broderick, age 24; pulmonary tuberculosis in the third stage; duration over one year. Brother died of quick consumption. Was very weak, emaciated, had a cavity in the left infra-clavicular region; confined continuously for two months previous to treatment. Weight December 1, 105½ pounds; weight January 26, 115 pounds, an increase of 7½ pounds in less than eight weeks. Lung capacity 100 cubic inches December 1; lung capacity has since varied between 110 and 140 up to January 26, 1895. This is one of the two cases who had had an abscess in the back. He was almost bed-fast when treatment began; coughed a great deal night and day; was very weak. Now coughs very little; no more pains or distress; is up and about and on night detail duty.

Henry Riley, age 34; weight, beginning of treatment, December 1, 115 pounds; weight January 26, 124 pounds, a gain of 9 pounds in less than eight weeks. Pulmonary consumption in the second stage; duration one and a half years. Tuberculosis in family. Had night sweats, diarrhea, marked dullness in the right supra- and infra-clavicular region; appetite poor; coughed froquently at night; expectoration considerable. Was a very sick man, but has improved until now he is on detail duty.

James McCafferty, age 48; pulmonary consumption second stage; duration of cough several years; serious illness in five weeks preceding treatment; spat blood during this peried; diarrhea was frequent; dullness left supra- and infra-clavicular region. Weight at the be-

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ginning of treatment, December 1, 106½ pounds; weight January 26, 129½ pounds; a gain of 23 pounds in less than two months. Lung capacity at the beginning 130 cubic inches; lung capacity January 26, 160 cubic inches, an increase of 30 inches. Was a very sick man, unable to do anything. Is now on duty at the City Hospital. Diarrhea stopped.

Thos. Morrison, age 42; pulmonary tuberculosis second stage; duration over three years; had hemorrhages in 1891. Cavity in left apex; pronounced dullness right infra-clavicular region; tubular breathing over same region; appetite poor; cough and expectoration pronounced. Has been in the City Hospital off and on for several years. Weight, beginning of treatment, December 1, 156 pounds; weight Jan. 26, 158 pounds. Lung capacity at the beginning of the treatment 160 cubic inches; lung capacity January 27, 170 cubic inches. Is very slightly better in general health.

John Hopkins, age 48; pulmonary tuberculosis advanced first stage, two years' duration. Mother died of consumption. Digestion was bad; cough getting continually worse; had lost flesh. Weight December 1, at beginning of treatment, 137½ pounds; weight January 26, 144 pounds, an increase of 6½ pounds in less than two months. Lung capacity at beginning of treatment 250 cubic inches; lung capacity varied between then and now, 260 and 270 cubic inches.

Conrad Hogan, age 32; pulmonary tuberculosis in second stage. Family history good. Had slight hemorrhages; night sweats; was getting weaker daily. Right apex involved and dull; coughed considerably. Weight at the beginning of treatment, December 1, 135 pounds; weight January 26, 142 pounds, a gain of 7 pounds in less than two months. Lung capacity at the beginning of treatment December 1, 180 cubic inches; lung capacity January 26, 200 cubic inches, an increase of 20 inches.

Henry Willer, age 46; pulmonary tuberculosis third stage. No family history of consumption. Both apices involved; had hemorrhages; had been ill five years. His disease began with pneumonia. Lung capacity at beginning of treatment, 140 cubic inches; lung capacity to-day is the same. Weight December 1, 133 pounds; weight January 26, 132½ pounds, loss of one-half pound. Temperature normal; expressed himself as feeling in better condition. It is not a favorable case; was losing fast before treatment.

Nile Johnson, age 54; pulmonary tuberculosis third stage; duration twenty months; dullness on percussion of the apices; tubular breathing; hemorrhage a year ago; expectoration not very pronounced. Weight December 1, at beginning of the treatment, was not recorded. January 1, 156 pounds; January 24, 158 pounds, a gain of two pounds in less than one month. This patient is not a favorable case; has variable temperature and chills occasionally.

Nicholas Schappo, age 56; pulmonary tuberculosis second stage; two years' duration; night sweats; left apex dull; coughed considerably at night and expectorated very much. Weight December 1, beginning of treatment, 108 pounds; weight January 26, 107 pounds; loss one pound. Lung capacity December 1, 140 cubic inches; January 26, 150 cubic inches; increase of ten cubic inches. This man is ageing and broken down generally and is not a favorable case, although he holds his own, and lung capacity is better. This is one of the patients who had an abscess on the back. He was going down hill fast before treatment. General tone undoubtedly improved.

Conrad Oppermann, age 47; pulmonary tuberculosis in the third stage; duration or serious symptoms, six months. Mother died of consumption. Has had night sweats; was exceedingly emaciated; very weak. Cavity in the right infra-clavicular region; coughed in the morning considerably. Has diabetes. Weight at the beginning of the treatment, December 1, 79 pounds; weight January 26, 82 pounds, increase of two pounds in spite of diabetic phenomena. Lung capacity at the beginning of treatment, 50 cubic inches; has varied since then between 50 and 70. This man was a stretcher case, brought to the Hospital helpless; could not get up the stairs for a long time, even after he began treatment; was very thin. Is now improved, coughs no more, is in better health, has better appetite, sleeps better.

Fritz Arnold, age 59; pulmonary tuberculosis second stage; duration two years. Tuberculosis in the family. Cough persistent; expectoration profuse; appetite bad. Weight, beginning of treatment, December 1, 122 pounds; weight, January 26, 127 pounds, a gain of five pounds in less than two months. Lung capacity, December 1, 50 cubic inches; lung capacity has since varied between 80 and 110. This is a broken down constitution generally, but has improved in spite of it, whereas, he was steadily declining before.

William Murray, age 41; pulmonary tuberculosis second stage; duration one year. Family history good. Is a drinking man. Consolidation right apex; night sweats; blood sputum; appetite poor; coughed a great deal; expectoration profuse. Weight, December 1, 132 pounds; weight, January 26, 134½ pounds, a gain of 2½ pounds. Lung capacity at the beginning of treatment, 70 cubic inches; lung capacity January 26, 120 cubic inches, gain of 50 cubic inches.

Thos. Bennet, age 64; pulmonary tuberculosis second stage. Been coughing four months; very emaciated; affected with long-standing gastritis. Right supra-clavicular region involved; dullness; lungs emphysematous; appetite poor; coughed considerable, sputum sometimes tinged with blood. Weight, December 1, at beginning of treatment, 125 pounds; weight, January 26, 130 pounds, a gain of 5 pounds. Lung capacity stays at 110 cubic inches.

Martin Lemp, age unrecorded. Weight at beginning of treatment, December 1, 131½ pounds; weight when discharged, January 10, 151 pounds, making an increase of 19½ pounds in six weeks. Lung capacity increased from 170 at beginning of treatment to 190 when discharged, a gain of 30 cubic inches.

All of these records were kept accurately by the phy

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sician and nurse in charge of the cases at the City Hospital, and by Dr. Cale, physician in charge of the Poor House cases, whose valuable assistance I secured, chiefly to act as witness physician, as soon as I had gained the idea that I was in possession of blood serum truly useful for the purpose intended. Dr. Cale was selected because of his qualifications in microscopy and surgery, accomplishments required in a man whose help it was desirable and policy to employ, to verify each case microscopically and to give an opinion on surgical cases of tuberculosis, which I therefore wished to secure for experiment. The sputum of every case treated contained the bacilli of tuberculosis before we began. Dr. Cale mounted specimens from each, and he and I examined every one of them. The sputum was again analyzed after several weeks' treatment, with the results above explained. All mounts have been labeled and kept for future reference. At the City Hospital, after the inauguration of the treatment, the immediate supervision of the injections and attendance was by Dr. Ehrlich, who did his duty carefully and conscientiously. Mrs. Johnson, a very competent woman, was in charge as nurse.

Blanks, worded as the sample shown you, were used, blank A being for the daily reports, and blank B for the history, nature, etc., of each case, and the compilation of the daily records at end of each month. And so, for each case, every precaution was taken that seemed necessary to insure reliable records and to convince the medical profession of the truth of the facts reported.

The Preparation of the Serum and Its Application.

By the use of the proper toxines I gradually rendered horses more strongly refractory to the action of the germ than they are naturally. Immunization was carried on with the assistance of a deputy veterinarian, Dr. Rouif, of this city, who had previously kept the horses under surveillance and had examined and tested them carefully with me, and independently, until we had convinced ourselves of their healthfulness. He did his work admirably.

Having immunized horses and tested the serum by experimental processes and noted its effects on animals, and having injected it in myself to determine its reaction, it became necessary to procure a number of tuberculous patients to test its value in human consumption. With this object in view, I secured from Dr. Homan, Health Commissioner, the permission to select a few cases at the Poor House for treatment; and also secured from Dr. Marks, Superintendent of the City Hospital, leave to try the remedy in this Institution. Both these officials have been very kind and entered into the scheme of test with a genuine scientific spirit. They turned over to me and my colleagues all the cases we wanted, and expressed their good will in many ways. I owe them my sincere thanks for their generous assistance and am under obligations to them, as also to the physicians at the Poor House.

The treatment began with injections of ten drops hypodermically, in the back between the shoulder blades. In a few days we increased to twenty drops, then to thirty, forty and sixty. Some were given as many as seventy drops once a day, for a while. In a few in private practice, I have injected as much as 150 drops at one sitting, every day for several days. No reaction whatever follows these injections, and the pain is no greater than the usual injection of a morphine solution. There resulted no accidents whatever, from a total of over 1500 injections in the various patients, except at the City Hospital, where two benign abscesses were produced, as occur sometimes after other kinds of hypodermic injections. They were, without doubt, due to micro organisms in the syringe, probably on the leather ends of the piston of the syringe used at the time, or in the needle. Careful disinfection of the syringe will always prevent this accident. The serum is in fact *inocuous;* absolutely so, if well prepared.

Prospects of Sero-Therapy.

The future of the serum therapy in several infectious diseases is secured beyond peradventure. We may have been too enthusiastic and may have expected more than we can now obtain, perhaps, and possibly the enthusiasts may be painfully disappointed in their hopes for immediate wonders from the sero-therapy in diphtheria, tetanus, etc., but the fact will always remain that this system is unquestionably rational and eventually it must yield success in therapeutics where all else must fail, for it is the one rational, truly physiological treatment; the only treatment, in my humble judgement, from which can be derived positive beneficial results in the cure of infections. It is Nature's own remedy. Man, with the serum, is using Nature's own weapon of defense; he has found out how he may add power to the natural resources of the organization in the fight for human existence. This system of treatment is not a spontaneous eruption in therapeutics. It is not the explosion in over zealous laboratory delvers, with more theory than experience; it is the result of years of research in all the laboratories and in chief clinics of the civilized world, particularly France and Germany. And it is not only yesterday that it appeared in practice. It was several years ago that Kitasato applied his antitoxine successfully against tetanus. Diphtheria has been treated successfully for a year or more. Syphilis is now treated experimentally with it; and lastly, your humble servant begs to submit to your indulgent criticism the result of his meager labors conducted under extreme difficulties (without state or financial aid that is, when these were most needed) particularly during the applications and experiments of the last two years. The future of sero-therapy in tuberculosis, is, in my mind, very bright and very promising. The first and second stages have been benefited under unfavorable circumstances, by only slightly immunized serum. Consequently, it is only fair to reason, that with more strongly immunized serum, such as I now have ready to use (I have only a limited quantity), much better and quicker results can be ob-

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tained, particularly if better hygienic and dietetic conditions obtain. Theoretically it would seem that, if by the use of this serum constitutionally the tuberculous processes may be arrested in a given case, injections directly into the pulmonary cavities, where these exist, or the excision of a rib or two and the use of tubercle antitoxine directly into the wound, or perhaps some other direct antiseptic medication, would prove practicable and useful to save life. It would seem, too, that such cases as hip joint disease, which, according to statistics, is more successfully treated by the expectant therapy than active operation, could be safely operated after the arrest of the tuberculous process; for, as Koenig has pointed out, it is the operation that disseminates the bacilli in such cases, so many of which terminate fatally after the usual surgical interference and the usual after treatment. And so in all surgical cases of tuberculosis, whether it invades the bones, the joints, the skin, the tendons or other organs to several of them, if the serum will, by some means, stay the microbes, as I have every reason to believe it will, there is ground for congratulation on its introduction to therapeutics.

Besides the use in the treatment of tuberculosis, we have, of course, to consider the means of protection of those exposed, by the practice of periodical injections of antitoxic serum, which will render the susceptible immune, for a while, at least. As a prophylactic, the antitoxic serum should prove very useful in the preservation of families tainted by inheritance, or exposed to the germs from their birth.

In closing, allow me to summarize the opinions arrived at after my few years of investigation and observations and the recent incomplete practical tests of my colleagues and myself.

1. Sero-therapy in tuberculosis is efficacious.

2. Blood serum of horses is naturally feebly antagonistic to the germs of tuberculosis, but in its natural state it is too slow, and it takes quantities too enormous for use in treatment.

3. Horse blood serum may be rendered strongly antagonistic to this germ by the proper treatment of the animals with properly prepared and tested toxines of the right character. But the serum thus obtained should never be used without previous tests as to its degree of immunity, and its purity from a microbic and chemic standpoint.

4. A horse properly treated three months may yield serum with immunizing power that will probably prove sufficient to arrest consumption, in the first stages, in three or four months and sometimes in less time; and in the second state in four to six months.

5. Discrimination should be made in the selection of cases, and judgement exercised to exclude from the favorable class all those seriously complicated bacteriologically, certain cases otherwise pathologically complicated, and other patients which practice alone will suggest.

6. Inasmuch as hospitals for consumptives are sadly needed any way, the success has already been sufficient to warrant the hope that in the near future such institutions will be built on modern principles of hygiene, for the exclusive treatment of tuberculosis. The serotherapy, with the adjunct treatments, promises better success than we had grounds to hope for before. However, I do not present the new treatment as a specific, or a cure; I merely report progress in our investigations. Had I been able financially and had I control of a hospital, I should not have reported for six months more.

Technique.

As to the technical features of the preparation of the *anti-tubercle serum*, I have little to say at present. The profession realizes that success with the serum therapy depends on accurate and delicate laboratory and experimental manipulations, which few are fully equipped to undertake. The preparation of the toxines, the measurement of their potency, the dosage for the realization of immunity, and finally, the innoculations of immune animals and the subsequent tests of the purity, the therapeutic value, of the serum extracted, and a hundred little details of moment are all questions of great importance, which necessarily involve special training. Commercialism might, at any moment, by some failure or accident, throw discredit on the new treatment, were I to explain in full the details of procedure in the production of the agent, before I have completed my researches to a point where I may show a larger number of improved cases and greater benefits. I have only a limited quantity of serum on hand—not enough to offer to the profession—having under treatment some thirty cases, whom I have promised and wished to inject for some time to come. The production of the serum is costly and, above all, it takes months to get the best material. I have reason to believe, however, that I have found the key to shorten materially the time which I have found necessary to strongly immunize the horses now in use

Limit to Liability for Injuries Resulting in Miscarriage.—The courts are experiencing considerable difficulty in keeping questions of sentimental damages out of personal injury cases. In Tunnicliffe v. Bay Cities Consolidated Railway Company, decided Dec. 7, 1894, the Supreme Court of Michigan holds that while in such an action, brought for the recovery of personal injuries sustained by a married woman resulting in her miscarriage, the jury is allowed to consider the case with all its facts, and to take into account, for the purpose of a consideration, not only the physical pain, but also mental suffering, in determining the award of damages and while, of necessity, this involves to some extent a consideration of the nature of the injury, and can not exclude from the consideration of the jury the fact that the physical and mental suffering of the mother by reason of such an injury would be more intense than in the case of an ordinary fracture of a limb, yet beyond this it would not be competent for the jury to go, and to attempt to compensate for the sorrow and grieving of the mother. This seems to be the general conclusion of all the courts.—*Jour. Am. Med. Ass'n.*

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EDITORIALS

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The Bacteriological Examination of Diphtheria.

The bacteriological examination of cases of diphtheria for the purpose of diagnosis seems to meet with a great deal of opposition on the part of practicing physicians. It has been claimed by some that such an examination is of little use because diphtheria bacilli have been found in healthy oral cavities and are often not to be found in some cases of diphtheria. The opposition to the introduction of a bacteriological examination in general practice was, in consequence of these considerations as well as the unfamiliarity of the practicing physicians with bacteriological procedures, energetically opposed at the recent International Congress for Hygiene and Demography at Budapesth and many other medical meetings.

It is claimed, however, by those in favor of bacteriological examination, that healthy persons do not present themselves for examination and that all cases of sore throat, in which the Klebs-Loeffler bacillus is found, are true diphtheria.

It is true, that in some cases of true diphtheria the bacilli may not be detected by a bacteriological examination. The bacilli may disappear, particularly after therapeutic interference, from the diseased tissues, or, in cases complicated by other infections, they may be lodged deeply in the tissues, where they cannot be reached by the present method employed for diagnosis. It is even conceivable that in some cases there is such a predominance of other bacteria over the diphtheria bacilli that the latter succumb in the struggle for existence which is going on in the culture medium. This, however, can only be the case in rare instances, as the Loeffler-glucose-bouillon-bloodserum, which is generally used for this purpose, favors the growth of the diphtheria bacilli to such an extent that, under ordinary circumstances, other bacteria, particularly staphylococci and streptococci, even if they are present in large numbers, have no chance to displace them.

Most of these objections become untenable, if the bacteriological examination is made in an early stage of the disease and by well trained and careful bacteriologists.

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An improvement upon the present method of supplying physicians with a cotton swab and tubes containing the culture medium for the diagnosis of diphtheria, has lately been proposed by E. v. Esmarch, who recommends instead the use of a small, fine sponge, the size of a pea. The sponge is wrapped in a piece of paper in a similar manner as druggists fold and close powder papers. A large quantity of such papers can easily be sterilized with their contents in the drying chamber. In this way the sponges can readily be kept sterile for any length of time. The papers are not opened and can be easily carried in a pocket book. When the sponge is to be used, a small forceps is sterilized by holding it a short time over a lamp and, after the instrument has become cool, the sponge is pressed against, or drawn over, the diseased mucous membrane and thereby inoculated by the suspected material. The inoculated sponge is returned into the paper upon which the patients name and address is written. It is then placed into an envelope, which is sent by mail to the laboratory for examination. Since diphtheria bacilli may be exposed to dryness for a long time and still retain their vitality, it need not be feared that they will die during the transportation, in case the sponge should dry out by evaporation of the moisture.

The possible objection that the infectious material may be spread through the mail is refuted by Esmarch, who draws attention to the well-known fact that innumerable specimens of the intensely infectious cholera dejecta have been sent by mail for bacteriological examination, yet no case of cholera has ever been reported in consequence of this usage.

It must be admitted that the adoption of the method as described above would be simpler and more convenient for the practitioner than the one now used by our boards of health, but the citizens of this free country would in all probability object to the sending of infectious material through the mail, no matter what arguments might be used by bacteriologists as to the harmlessness of the procedure. In fact, there is a law in existence prohibiting the sending of such specimens by mail.

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The promptness with which the health boards of our American cities have taken up the bacteriological examination of cases of diphtheria, deserves much praise and if, after a thorough trial, more experience in and possible improvement of, the present system, it will stand the test of time and be found of real value, which we expect and earnestly hope, its advantages, which are too obvious to need much discussion, will be appreciated by everybody.

The Late Dr. Alfred L. Loomis.

At a special meeting of the Medical Board of Bellevue Hospital held January 24, 1895, to take action on the death of Professor Alfred L. Loomis, M.D., LL.D., the following resolutions were entered on the minutes of the Board:

Resolved, That by the death of Dr. Alfred L. Loomis the members of the Medical Board lose a faithful and respected associate, the profession a brilliant and honored member, and the people a wise and vigilant public servant.

Resolved, That the members of the Medical Board sympathize most deeply with his family in their sad bereavement.

Resolved, That these resolutions be sent to the family and be published in the secular and professional press.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated meeting, Saturday evening, January 19, 1895, the President, F. D. MOONEY, M.D., in the chair.

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DR. LUDWIG BREMER read a paper (see page 144) entitled,

ON CERTAIN MORPHOLOGIC AND MICROCHEMIC PECULIARITIES OF THE BLOOD IN DIABETES AND GLYCOSURIA.

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DR. D. V. DEAN was very much interested in the subject, for several reasons. First, because of a general interest in different forms of diabetes; secondly, because he had read Dr. Bremer's first paper on this subject, and had had an opportunity of comparing his observations with those made by himself on a case which had been diagnosticated as Bright's disease. The patient had an enlargement of the left ventricle, which could be accounted for in no other way, although no evidence of Bright's disease was found. He has been kept under observation for a number of years, and, although other methods of treatment have been employed, he has been kept largely on the diet treatment and is now about as well as he ever was.

As long ago as 1876, while speaker was in the City Hospital, he read a paper by Dr. Fischer, on the use of "Eosin in Microscopic Work," and it was recommended as an excellent thing in every respect. A year later, in 1877, Lazolki wrote an article in line with Dr. Fischer's work on eosin. In this paper he reported that he got no reaction with eosin on red blood corpuscles from which the hemoglobin had been removed, and that the reaction was proportionate to the amount of hemoglob in present. No reaction was observed on white blood corpuscles until hemoglobin was used, and then the hemoglotoxine reaction was observed only on the centers or nuclei. He speaks of one thing in particular; namely, that eosin is the only substance that is refractory to the red-blood corpuscles, an action which he explains by supposing that there is a decomposition produced by the action of eosin on the hemoglobin, which is produced by no other substance. Speaker thought that the peculiar action of eosin on hemoglobin will be found to be due to some exchange in the way of gaseous decomposition.

DR. PAUL PAQUIN thought that the positive facts arrived at by the essayist are of exceeding importance, because they localize the pathology of diabetes and glycosuria, they show a number of new elements in the blood, and open up an entirely new avenue in therapeutics. We know that heretofore the pathology has been localized in many different organs, whereas, by this discovery it is shown that it is in the blood itself. We all appreciate the importance of accurate diagnosis of diseases of the blood, and how difficult investigations of this nature are. The changes which have been demonstrated may lead to the discovery of some therapeutic measures of great value in the treatment of these maladies.

DR GRINDON, referring to the statement that grape sugar was found in the blood, said, that some authors state that grape sugar is found in normal blood; at least, blood taken from certain parts of the body.

DR. FUNKHOUSER asked Dr. Bremer what importance he attaches to the experiments where glycosuria has been produced by irritation of the floor of the fourth ventricle. It has been said that diabetes is a blood disease, wherein there are changes in the blood corpuscles, as the doctor has demonstrated; but there must be something back of that. Why are these changes, and what causes them? Again, it has been demonstrated that the staphylococcus is more readily proliferated in a diabetic subject than in ordinary cases. He, therefore, asked the essayist whether he had examined for pus in any of his patients.

Speaker had never cured a case of diabetes, but patients may be cured, so far as the evidence of sugar in the urine is concerned. Sooner or later, abscesses or

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carbuncles are formed, which complications necessarily prove fatal.

Dr. Abeken had followed out the experiments in this line which Dr Bremer had kindly pointed out to him, but he had failed signally in his results. The essayist said that this is probably due to the quality of the eosin, and speaker therefore asked what kind of eosin is required. This is of importance, so that others, who may wish to experiment, may not also be disappointed.

Dr. Wm. N. Beggs considered the subject of very great importance; one which, owing to the great reac tive power of the blood, is liable to disgust a young ob server by the negative results obtained in experimenta tion. It requires a great deal of time to develop a tech nique which will give reliable results.

One point which the speaker thought the essayist had touched upon rather briefly, probably because it is not an essential part of the paper, is, the assertion that he had demonstrated the rudimentary nucleus of the red blood corpuscle. If that is proved to be the case, it is an observation as important as the main part of the paper; for it has not yet been accepted that there is a rudimentary nucleus of the red blood corpuscle, although the subject has been investigated ever since microscopical examinations have been made. Some difference of opin ion exists in regard to the relation which elements of the blood bear to each other. One of Ehrlich's pupils be lieves that the metrophalous polynucleus is not of an essentially different character, but only a larger stage of development of the fourth. Speaker took issue with Dr. Bremer, in regard to the nucleus of the ipsylon cell. Although it is a mono-nucleated cell in the majority of instances, it can be demonstrated to be polynucleated at times. Then, the elements 2, 3, 4, 5 and 6 have been recognized by Ehrlich and his pupils, and while their distribution and arrangement may be new as made by Dr. Bremer, speaker could not understand how he could claim to have discovered them.

Speaker asked the essayist if he thought that the other elements of his normal stain have any effect upon the eosinophinous reaction of the red blood corpuscles. In his own examinations, particularly during the Christ mas holidays, he had met with difficulty in obtaining the eosinophanous reaction. In the examination of his own blood with the ordinary preparations, using, how ever, glycerine as well as eosin, he was not able to get any result at all, neither the red nor the white corpus cles would take the stain. After reading the reprint of Dr. Bremer's first contribution upon the subject, this re sult caused some excitement in his own mind, and he had an examination of his own urine made. It was re ported, however, that there was absolutely no evidence of glycosuria. He could not follow up the experiments mentioned in Dr. Bremer's first paper, as his results dif fered in that none of his acid dyes, which he used with glycerine, would stain either the red or white blood cor puscles.

He questioned the statement of one of the speakers, who said that the paper demonstrated that the pathology of glycosuria is in the blood. This has not yet been proved, and to demonstrate that it will require more in vestigation than that published by Dr. Bremer up to the present time.

Dr. Bremer said he did not know whether he could answer all the questions propounded in a satisfactory manner. In regard to Dr. Funkhouser's question, he said he had never examined for pus in a diabetic per son. He had seen a number of experiments in his pro fessional career, but had never repeated them since he had undertaken the study of the blood. He promised to do so some future time.

The pathology of glycosuria, he said, is as obscure to him as to anybody else.

The assertion of Dr. Grindon may be found in books, but nobody has ever demonstrated the presence of sugar in normal white blood corpuscles. It is probably one of the myths which has been handed down from genera tion to generation, and nobody knows how it originated. Personally, he believes that there is no more sugar in the white blood corpuscles in normal blood than there is in the red ones. Soaked in a sugar containing fluid, they necessarily also contain some sugar.

As to the epsilon cells, referred to by Dr. Beggs, speaker said they are always and under all circumstances mononucleated It can be demonstrated by blood specimens to a certain extent, that the particles to which they owe their name, polynuclear cells, are in reality connected by a filament. In the most juvenile state they are easily made out as polynuclear, but by con striction of the elongated nucleus at different points, a number of bodies arise which look like nuclei, but are in reality fragments.

In reference to the observations of Dr. Beggs with glycerine, speaker said, it should be eschewed in exami nations of the blood. It disturbs the staining solutions and is absolutely worthless as a diagnostic agent. At most, it may be used with eosin stain, in the demonstra tion of the alpha granulations, which, however, are easi ly recognized by their size, even without stain.

In regard to the treatment of diabetes, speaker had made some observations, which, however, he did not offer as official, but rather as colloquial. When Ehrlich had discovered the peculiar reaction which methylene blue has on the nervous system, he employed it for neu ralgia and a number of functional nervous affections, and apparently with success. Likewise, when the affini ty between methylene blue and the plasmodium malarial was discovered, it was given for intermittent fever, ap parently with success. It is claimed that malarial fever is cured by methylene blue, and that the plasmodium disappears under its influence. When speaker noticed the peculiar want of reaction of eosin on sugar blood, he concluded that sugar might possibly be a remedy for diabetes.

He had under treatment at the time, a patient, 26 or 27 years old. The amount of sugar in this patient's urine varied, 8 per cent being the highest, the specific gravity running up towards 60 at one time. Under an-

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other form of treatment, without strict limitation of diet, it contained 4 to 5 per cent of sugar. Eosin was given and the sugar, under ten days treatment, fell to 1½ per cent, with great improvement in the mental and nervous symptoms. There was at once great improvement in the aptitude for mental application, and the peculiar weakness in the knees, of which many of these patients complain, had also disappeared. A hopeful state of the mind had also set in. Speaker was at first sceptical in regard to this remarkable success, and thought that the mental impression made by the change of treatment was responsible for the decreased amount of sugar. The eosin was accordingly left off, when the per cent of sugar immediately rose to 4½; so that there seems to be a causal relation between the administration of eosin and the amount of sugar in the urine.

The eosin is administered in doses of one half and one grain, three times a day. That obtained from Meyer Brothers is as good as that from other sources, which also applies to their methylene-blue.

Antipyrine also has a decided influnce on the amount of sugar. It has to be administered in large doses in order to produce a perceptible effect.

Speaker emphasized the fact that he had reported only an isolated case, and did not wish to be looked upon as having recommended a "sure thing." He should feel highly pleased if it proved to be a new remedy in the treatment of diabetes, and should also be pleased to hear from other gentlemen, who might see proper to use it.

Dr. Meisenbach.—What is the tolerance of patients to eosin?

Dr. Bremer.—Three grains. One grain and a half every 24 hours, in solution, is what I have used. But it is very disagreeable stuff, on account of its intense staining qualities.

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Stated Meeting, Saturday Evening, Jan. 26, 1895, the Presient, F. D. Mooney, M.D., in the chair.

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Dr. Paul Paquin read a paper (see page 147) entitled,

Anti-Tubercle Serum.—The Treatment of Consumption by Sero-Therapy.—Report and Presentation of Cases Treated.—Exhibition of Serum, etc.

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Dr. George W. Cale had been working with Dr. Paquin, since the latter part of November, having had charge of six or seven cases at the Poor House. The result has been about the same as that in the cases reported by the essayist. All have gained in weight, cough and expectorate very much less; but none were in condition to come so great a distance in this inclement weather, except Mr. Buckley, an attendant of the insti tution. He has had a cough for two years, has had night sweats, expectoration, loss of weight, and a small, dull area over the base of the left lung. The tubercle bacilli were found in the sputum. Treatment was begun on December 5, and for the last three weeks he has had no cough or expectoration. It is not possible to get enough sputum for a second examination. The dullness has entirely disappeared, he has gained six pounds, and says he feels better than he ever felt before in his life. In all the cases where a second microscopical examination of the sputum has been made, it has been found that the number of bacilli has very much diminished.

Speaker added that the treatment is applicable to other forms of tuberculosis; particularly to the bones and joints, and in abscesses of the lungs. A number of cases who have abscess cavities of the lungs are under observation, in whom it is proposed to exsect a portion of a rib and to drain the cavities, after the tubercular process is stopped.

Dr. I. N. Love said that the natural immunity from tuberculosis, claimed by some authorities, to exist in the horse, renders that animal very valuable for experimentation with the blood serum therapy. But the thought suggests itself, whether the virtue of the remedy is due to a specific quality contained in the serum itself, or whether it is due to an antitoxine from which antagonizes the disease. As yet, no one has been able to separate the antitoxine from the serum, so that we can see it. We know that the greatest enemy to all germs, is good healthy blood, and the best way to resist their inroads, is to nourish the patient. Is it not possible that the serum is a concentrated "extract of nutrition," and that by being absorbed directly into the circulation, it acts so much more promptly and efficiently? In the cases presented to-night, there is evidence of extra nutrition; they weigh more, their skin is moist and elastic, and they look better nourished. The point, then, to decide, is, whether the serum acts merely as a nutrient, or whether it possesses an element that is a specific against the tubercle bacillus.

In closing, speaker referred briefly to the recent reports of the treatment of pernicious anemia with bone marrow. In pernicious anemia, the marrow of the bone is soft and has a tendency to liquify, and is very prone to disease. It has also been pretty definitely established that bone marrow plays an important part in the elaboration of blood corpuscles. Based upon this latter, physiological function, the feeding of raw bone-marrow has been suggested, and the results have been very favorable. It is upon this same principle that extract of thyroid gland is fed in myxedema. It seems as if we are on the border line of remarkable results in the treatment of disease, by means of remedies obtained from the lower animals.

Dr. Funkhouser had had some experience in the treatment of consumption with lymph prepared in Koch's laboratory, and although some of his medical friends had used the remedy with good results, he had never had any good effects from its use. He is naturally inclined to be a pessimist in the treatment of disease, and particularly so with regard to the treatment of consumption.

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The treatment, as outlined by Dr. Paquin, is diametrically opposite to that as outlined by Koch. The latter injects pure cultures of the bacilli and their toxines, thus trying to combat the disease with its own bacilli; whilst, by Dr. Paquin's method, the product of the bacilli, their antitoxine, alone is used.

As another instance of modern therapeutics, speaker mentioned the experiments with the streptococcus erysipelas on epithelial cancers, made by Coley and others. The results have been very successful, and in a number of inoperable cases, the growth was permanently removed. The effect, however, seems to be more marked on sarcoma than on carcinoma.

Dr. H. W. Loeb expressed himself as being a firm believer in the serum therapy especially as applied in diphtheria and consumption. He was almost tempted to believe that the millenium in medicine has arrived, as it did in surgery some time ago. It is no more remarkable or mysterious to relieve diphtheria and consumption, than it was to permit the surgeon to introduce his knife anywhere without producing infection. Nor will this treatment be of more value to the word, than was the relief of small-pox by agents which must be considered somewhat similar in action.

The results in the treatment of diphtheria have been almost uniformly good, and no better proof of this could be offered, than the testimony of Prof. Virchow, who always has been very conservative in his statements. He stated, before the Berlin Medical Society, that in three or four hundred cases of diphtheria treated in certain hospitals, the mortality was reduced from 47 to 8 or 10 per cent, during the first eight or ten weeks, with the antitoxine treatment; and when, for some reason, the suppply of serum was interrupted, the mortality immediately rose to 45 per cent. The improvement first noted immediately occurred when the serum was again used.

As far as the treatment of consumption with the serum is concerned, speaker thought that it is the only rational treatment that has even been suggested. It is more rational than the nutrition treatment; for, by the latter, an attempt is made merely to build the patient up, but not to combat the disease directly. It is true, we have not yet been able to separate the antitoxine from the serum, but the time will come when this will be accomplished, and we will then be able to combat the disease with the chemical entity.

Speaker asked the essayist to try the effects of the treatment on laryngeal tuberculosis.

Dr. Geo. F. Hulbert thought that the work done by Dr. Vaughan, of Ann Arbor, deserves consideration in connection with this subject of therapeutics, and this class of agents. This experimenter has produced a material from yeast, which he calls yeast nuclene, or nuclenic acid. This agent was used with success in the case of a lady who had undergone an operation of hysterechtomy, and who had had a very narrow escape from death. Speaker thought that the injections of nuclenic acid saved this patient's life. Since that time he has used nuclenic injections with very good results in infectious conditions.

At the time the animal extracts were presented to the profession, he became very much interested in them, and used them with great benefit, particularly in gynecological work. He had occasion to use use thyroidene, testine and ovarine, and has a record of ten or twelve cases of ovarian disease, in which ovarine was used exclusively after other therapeutic measures had been exhausted. After the first few injections the patients improved, the symptoms began to disappear, and nutrition kept pace with the disappearance of the symptoms.

If the experiments, reported by Dr. Paquin to-night, prove to be uniform, we shall recognize more than ever, that in the presentation of this serum therapy we are supplying a chemical lack of the system, which is just sufficient to create a proper adjustment of health and nutrition supplying essential elements lacking in the system.

Dr. Paquin closed the discussion, as follows:

In regard to Dr. Love's remarks, as to whether or not the principle utilized is the natural immunity of the horse, I will say, there is absolutely no difference between the natural immunity and an artificial one, if we utilize the principle of Nature herself to produce the result. The horse is naturally immune from tuberculosis to a certain degree. However, it is sometimes possible to inoculate this animal and produce a slight tuberculous lesion; but it is hardly possible to produce general tuberculosis. It is possible to inject pure cultures directly into the lung tissues of the horse and get no permanent lesion whatever, as far as can be judged by physical signs, although we may get a reaction. But we can increase the immunity very greatly by a proper technique.

The immunized serum therapy, as Dr. Funkouser has remarked, is directly opposite to the treatment of Koch, his lymph containing the toxines from cultures of the tubercle bacillus.

Dr. Hulbert's remarks, in regard to Vaughan's nuclene; and Dr. Love's, in regard to nutrition, ought possibly to be discussed somewhat. There is no question in my mind, that there is something in the nutrition of the system. But I do not believe that is the only question; at any rate, I do not think that it is the main thing in antitoxic serum. I think that the results are due to chemical substance produced in the system. There is no question that there is an antitoxine in the diphtheria serum, and very likely it is the same here. Serum therapy is simply utilizing Nature's forces to protect against disease.

The horse does not contract tuberculosis accidentally; therefore, we may use its serum with benefit when the immunity is strongly increased. It is perfectly rational to hope to assist the patient in consumption with it. The bovine species does take tuberculosis accidentally, so we can not make use of the serum of blood of animals of this species.

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It seems to me there can be no doubt at all that this

is the right principle of treatment, whatever may be our belief in regard to other methods of inoculations. As I stated, in tuberculosis we almost always have a mixed infection when there is a cavity; and when this exists we have more serious night sweets, and are then at something of a disadvantage. The serum directed to the tubercle bacillus may not affect any other germ; for example, in diphtheria, it is impossible to destroy the cocci found in the throat with the antitoxine.

ABSTRACTS

MEDICINE.

Bicycling for Women.—Dr R. L. Dickinson contributes an interesting article on this subject to the January number of the *American Journal of Obstetrics*, in which he says that among the most difficult questions which present themselves daily is the problem of prescribing exercise. So unused is the average woman to exercise that muscle work for its sake present none of the delight and afterglow which men usually get from it. To her the gymnasium often means dull routine; the bowling alley means broken corset bones under a one-sided sudden strain; dancing is done in a bad atmosphere, in unsuitable dress, during sleeping hours; and horseback riding, especially at a trot or with the close seat, is a jolting of the pelvic organs, with their supports stretched tight by the snug corset that the tailor-made habit demands. Only the summer presents, in the various sports, a means for the development of muscular energy whereby much good may be accomplished.

Bicycle riding, says the author, has certain advantages over the present style of horseback riding. The fashionable contorted seat does not develop the body symmetrically, although, when women get into the habit of riding part of the time with the stirrup on the right side and part of the time with stirrup on the left side, one objection to the spinal rotation and the asymmetrical development will be overcome. However, he think that cheapness, safety accessibility, and the small amount of preparation required are in favor of the wheel, in a greater degree even for women than for men.

With regard to the sewing machine, the question has often been asked why women are advised to ride the bicycle while they are warned against the sewing machine. Dr. Dickinson thinks that the conditions under which the two forms of exercise are taken vary radically. A women at the sewing machine, he says, must stoop to focus her eyes accurately on her work, and such a posture in the corseted women brings a strong pressure to bear on the pelvic contents by means of the lower part of the metal front-pieces of the corset. This is illustrated in Dr. Dickinson's article by a cut showing the pelvic inlet nearly horizontal, and pressure from the corset steels gaining free access to the pelvic organs. The action of the legs also is a distinctly constrained one, and the indoor motion is a series of very short excursions in rapid succession, while the road machine calls for a full, slow sweep of the whole leg. If a women rides a bicycle, stooping well forward while dressed in a snug corset, with her saddle far back, so as to be obliged to thrust forward on her pedals, the conditions are somewhat analogous to those under which she works at the sewing machine. She should wear loose body clothing and set upright, so that her weight is borne largely on her tuberosities, with a level saddle fairly well farward; then the thrust is chiefly downward, the increased intra abdominal pressure is lacking, and all the objectionable features are eliminated, except the proneness to excessive indulgence. The effect on the circulation will be that of any general exercise; therefore the pelvis floor and the organs above it will receive a well-defined stimulus, and by degrees a permanently increased tone, from regulated riding.

In bicycling there seems to have been found at last, says Dr. Dickinson, a form of outdoor muscle work which attracts women and entices them to many hours in the open air. It prossesses all the advantages of walking or climbing, and it exercises a large number of muscles; therefore it seems to the author that there is no single exercise that will so efficiently develop muscular tone in the pelvic floor as this. Dr. Dickinson cites somes cases illustrative of this, and gives a cut with two tracings from the same pairent showing the difference of her profiles with and without a loose corset. Nearly all the objections to the use of the corset raised by medical men involve the supposition that whatever straining the pelvic contents are subjected to must necessarily be under a snug corset and with the woman bending forward. It has been seen that these are distinctly hurtful conditions, although says the writer, some women no doubt have suffered no harm from it. To direct, however, that the corset should be taken off, leaving a narrow girdle of pressure, does as much physicial harm as it does good, and to replace the corset by a health waist is to make an improvement of relatively small value, although the rigid front steels, the most harmful factor in the corset, will be banished. The auther is convinced, from his own studies, that the health waist should not be countenanced except as a temporary expedient where the breasts are large or flabby.

There has been made, he says, a very grave objection, which, if well founded, should induce us to be exceedingly cautious in suggesting this exercise. It has been said to beget or foster the habit of masturbation. It is perfectly conceivable that under certain conditions this habit could be engendered, but if the rider sits upright and has her saddle moderately tight and fairly level, the weight rest upon the bottocks, and there is anatom-

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ical reason to believe that this posture will diminish erotic tendencies, and that with proper precautions there is very slight danger of the habit being started or fostered.

Under proper conditions of costume and posture, with care that the exercise is increased gradually and properly graded for individual cases, and where there is no acute inflammation to contraindicate it, bicycling will probably show itself capable of large results as an agent in curing pelvic disorders, since it is one of the few exercises which attract women. It seems hardly too much to say, says Dr. Dickinson, that the promise from the bicycle is far reaching. Through it and the habit it will engender we may look for better and freer dress and shorter dress in bad weather, for better exercise, for out-of-door activity, for steadier nerves, for stronger muscles, for painless periods, and for easy labors.—*N. Y. Med. Journ.*

Why Young Men are Bald.—In a recent issue of one of our valuable exchanges appeared an article crediting mal assimilation as the cause of so much bald ness among comparatively young men. There can be no doubt the premises taken is correct.

Baldness is equally as prevalent as dyspepsia. Nature protects and provides the vital organs with the proper amount of nutriment necessary for the supplying of the requisite amount of blood for the performance of their respective functions. But in absence of blood sufficient to meet the demands of all the organs, the more important, such as the heart, lungs, etc., are supplied at the ex pense of the least vital, like the hair, etc.

This fact is frequently demonstrated in cases of se vere fevers, where Nature is forced to economize in or order to supply all possible nutriment and blood to the more vital organs. As a result the hair receiving not sufficient nutriment to keep life soon shows a disposition to fall out. That the hair is a true indicator of the life of the individual is seldom so regarded; but a fact that microscopical research will prove. You will notice under the lense the different conditions of the hair showing where each instance of lack of sufficient blood supply is indicated by an apparently unhealthy condi tion of the cells, which supply may have been curtailed by overtaxed brain, anxiety or improper feeding. The tendencies of this age is that of rapidity, and it has be come a fact that many business men cannot find time to eat, and very few can allow themselves sufficient time to properly masticate their food, irregularity in meals is the cause of dyspepsia as much so as improper mastication.

The human system forms habits and performs its functions in a measure according to such habits. If you are accustomed to eating at a certain hour the stomach expects and is prepared to receive food at that time, and being prepared it can more thoroughly assimilate it: the gastric juices being more abundant. If, however, you eat irregularly you take your stomach by surprise, and as a consequence not being prepared the assimilation is imperfect. Improper mastication or hurried eating as it may be more properly called is the commonest cause of indigestion. The food in entering the stomach should be in the proper state of fineness and contain a requisite amount of moisture supplied by the salivary glands, under such conditions the gastric juic penetrate thoroughly and the chemical decomposition is perfect. Under contrary conditions the digestive organs are taxed to such an extent to soon exhaust their supply, and unless Nature can assimilate the food alone, artificial means must be called upon. This artificial mode of supplying the stomach with digestive juices has received more attention at the hands of the medical profession than any one subject during the last decade. The fact that Nature has placed within our reach remedies which even the unscientific are thoroughly conversant is seen in almost every community, more particularly is this case, in the tropical climates where climatic malarial influences make it necessary for them to combat with most formidable ailments. This is especially the case in Mexico, the home of the pine apple (ananassa sativa). The natives have for many years been acquainted with the wonderful digestive properties of the juice of this plant when gathered at the proper time, but we owe to Senor V. Marcano the discovery of bromelin, the active digestive principle of the fruit. This eminent scientist demonstrated that this vegetable is superior to any animal ferment and superior from the fact that it is susceptible to successful administration in all derangements of the gastric region. And unlike other ferments it requires no special conditions to make it active. It is equally successful in its action in acid, alkaline, neutral or alcoholic solutions. To this fact and the elegance of the preparation Zumo-Anana owes its success. Its delicate flavor and agreeable taste renders it an invaluable aid to the physician in cases where the stomach will not accept nauseating animal digestives. This preparation is an excellent stimulant tonic as well as digestive as it it contains 50 per cent of madera wine and the same amount of pine-apple juice.

NOTES AND ITEMS

The Treatment of Miliary Tuberculosis with Guaiacol.—The *Journal des praticines* for January 12, publishes an article on this subject in which the writer says that since the year 1893 simple painting with guaiacol has been employed in cases of febrile tuberculosis. Bard, Lepine, and others have demonstrated by a series of observations that its antipyretic action does not improve the condition of consumptives with cavities, that it may perhaps ameliorate sclerosis, but that it produces better results in limited miliary tuberculosis of a doubtful diagnosis. These lasting curative results differ from the transitory

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antipyretic action obtained in ordinary tuberculosis. The writer relates the history of four cases in which this treatment was employed, and the following conclusions from a physiological point of view, he says, may be drawn:

1. The antipyretic effects of guaiacol are rapid and lasting in miliary tuberculosis.

2. The effects on nutrition are shown by the ameli oration of the general condition and of the local lesions.

3. Sometimes cutaneous erythema, hypothermia, and a tendency to collapse may be observed, which are due to the impurities in the guaiacol, and not to the medica ment itself.

Its positive indication is true tuberculous fever with the formation of new granulations; its contraindication is hectic fever.

The method of administration consists in varying the dose from eight to thirty grains at each application. Boscq prescribes the following mixture in order to produce the greatest tolerance: Equal parts of chemically pure guaiacol and sweet almond oil. The back of the hands are painted with this mixture and immediately covered with cotton, which is kept in place with a bandage.

A Russian physician, Bartoszewicz, who experimented with this treatment on sixty five patients in Dr. Laminowsky's service at Kharkow, employed compresses of guaiacol on the anterior part of the chest and over the back. A piece of linen was moistened with from twenty-five to thirty drops of pure guaiacol and applied on the skin, which was then covered with waxed paper kept in place with a bandage, and allowed to remain for from one two hours.—N. Y. *Medical Journal.*

Strontium Salicylate.—Dr. H. C. Wood, in common, as he supposes, with most practitioners has for many years been trying to find some way of getting the general action of salicylic acid without the gastric disturbance which so often follows the exhibition of its salts of sodium and potasium. In the current number of the *University Medical Magazine* he describes a salicylate of strontium which he has had prepared and employed in a large number of cases in quantities of from 15 to 120 grains a day. In doses of 5 to 10 grains given after meals, the salt very commonly improves digestion and in the dose of 5 grains an hour after meals in flatulent dyspepsia and various conditions of tendency to fermentative changes in the alimentary canal, it is a useful intestinal antiseptic, seeming to him to give better results than do salol, naphthol or other of the older antiseptic remedies. It has not yet been tested in acute articular rheumatism and Dr. Wood thinks it would probably be less efficacious in this dis ease than the ammonium salicylate; but in muscular or subacute rheumatism with a tendency to digestive dis turbance he has found it a very valuable remedy, exert ing the action of the salicylates upon the diathesis and improving instead of injuring the digestion. It may be given in solution, but is best administred in 5 grain capsules. In his preliminary experiments on the lower animals, undertaken to determine the influence of this salt on the circulation, Dr. Wood found that the dose of the strontium salicylate necessary to lower arterial pressure was nearly twice that of the sodium salicylate and distinctly more than that of the ammonium salicylate.—*Jour. Am. Med. Ass'n.*.

The Typhoid Oyster.—That veteran sanitarian, Secretary Lindsley, of the Connecticut State Board of Health (*Journ. Am. Med. Ass'n.*) must derive no little amusement from the promptness which his discovery of an etiologic relation between typhoid fever and the oyster has been followed up by his British colleagues in public hygiene. Sir William Broadbent, Sir Peter Eade and a host of others of lesser note are flooding the English journals with instances of oyster-typhoid, suggestions of remedy and of protection of "our succulent friend from deleterious contamination," etc. And now comes Sir Charles A. Cameron, Medical Officer of Health for Dublin, with a claim of priority of discovery. It appears that some fifteen years ago Sir Charles read a paper on "Typhoid from Oysters," which "seemed to amuse but not to instruct" his hearers; since then, he says, the "possibility of the materies morbi of enteric fever and of other diseases gaining access to oysters has frequently been discussed, and I have published the cases of a large number of persons who were undoubtedly subjected to severe gastro enteritis as the result of eating oysters which were undoubtedly fresh." At best, however, Sir Charles and the others titled and untitled gentlemen have only shown that, because oysters found in sewage and sewage in oysters, and because the typhoid poison is sometimes found in sewage, therefore the oysters might be the vehicle for conveying the poison to the small intestines of its host. But they have failed to show that what might happen really did happen in any specific instance. It remained for our own Dr. Lindsley to demonstrate such an occurrence in the case of the Wesleyan College students.

Dr. Emory Lanphear has severed his connections with the College of Physicians and Surgeons, and resigned as editor of *The Clinique*, the official organ of the College.

Habitual Constipation.

℞ Melachol, - - - - - - - - 1 bottle

Sig. Teaspoonful at bed time.

PATOKA, ILL., May 1, 1893.

I consider Dr. Marshall's Convertible Saddle-Bags and Hand Case just what all physicians need.

DR. W. W. MURFIN.

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Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Observations on the Abdominal Viscera in Seventeen Autopsies.

BY BYRON ROBINSON, CHICAGO,

Professor of Gynecology in Chicago Post-Graduate School.

[CONCLUDED.]

The term omentum means stretching from the stomach to some other organ. The gastro-hepatic omentum streches from the liver to the lesser curvature of the stomach. In the seventeen bodies it presented itself as very thin, in fact almost fatless, for when the index finger was passed through Winslow's foramen and pushed upward the upper layer was so thin that one could not feel it. Fatt seemed to collect in pendent portions of the omentum. The peritoneal folds which form mesentery and omentum belong to the digestive tract.

The peritoneal folds which form ligaments are more combined to solid organs as, *e. g*, the liver and uterus; however whether the folds be named mesentery, omentum or ligaments, they are simply peritoneum. Many fossæ and folds of peritoneum were found in the autopsies produced by blood-vessels both living and atrophied. As samples, the ileo-cecal, sigmoid and fossa duodeno-jejunalis might be mentioned. In one body I found that the obliterated hypogastric artery produced peritoneal or mesenteric folds over an inch wide. There were five women in the seventeen autopsies. Three presented extreme pelvic inflammation (60 per cent). Two were free from inflammation in the pelvis. Three presented distinct retroversion. The three cases presenting pelvic peritonitis showed well the tract and source of the inflammation. It was very plain in each case that the infection began to spread on each of the three cases from the mouths of the Fallopian tubes. In every case the old peritoneal bands were dense and extensive. The chief factor to observe in the pelvic inflammation in woman is that the inflammation tended to close the fimbriated ends of the tubes. In these cases of pelvic inflammation the tubes and ovaries generally lie behind the uterus low down in the pelvis. The most extensive bands, adhesions and exudates always lie at the fimbriated ends of the tubes. Some of the bands are in thin, flat sheets, others are thick and round while some look like organized adhesions. Though some deposits appeared very large the appendages could always be freed by careful cleavage. If one will carefully hunt for points where the finger can start a separation, where one can cleave the tissue apart, the appendages will soon unroll themselves, though the inflammation may be dense, estensive and strong. I particularly noted that in the cleavage or freeing the appendages I never once tore a bowel. By careful cleavage the old adhesions separate like layers of wet paper. In some of the cases one can find the fimbriated tubal ends buried in the adhesions while no trace exists around the uterus. I noted that when peritonitis was severe about the tubal ends that the cellular tissue under the peritoneum in the broad ligaments shared in the inflammation, *i. e.*, pelvic peritonitis was frequently accompanied by pelvic cellulitis from continuity of inflammation. The mouth of the tubes having dropped down low in Douglas' pouch and produced exudates. These exudates surrounded the fundus while fresh and when they organized and contracted they dragged the fundus down with them, hence we have so much retroversion in pelvic adhesions. The uterus is retroverted frequently in salpingitis.

These three autopsies well demonstrated that pelvic peritonitis is salpingitis. They demonstrate that the chief inflammatory diseases of woman ascend in the following order, viz: first, endometritis plus endosalpingitis, plus ovaritis, plus as much peritonitis as was involved by the infection at the end of the tube. The autopsies show that displaced uteri are chiefly induced by peritonitis. Curious enough, the woman with the apple-sized fundal myoma was totally free from adhesions. Its mechanical irritation from jolting around in the pelvis did not induce even an aseptic fibrinous peritonitis.

Several of the men presented inflammatory products around the semen sacs. This, no doubt, was the result of gonorrhea. I proved some years ago that man suffered from gonorrheal inflammation of the semen sacs —vesiculitis seminalis. The sacs, when they are inflamed are irregular in form, sacculated, surrounded by old adhesions and old constructions and dilations. Men

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have gonorrhea of the semen sacs just the same as women have gonorrheal salpingitis and it is practicaliy incurable in both sexes. The persistence of gonorrhea in both sexes is yet inexplicable.

The three great peritonitic regions, pelvis, appendix and gall-bladder are special points of practical interest which I wish to present to the profession. The classification which I have made of peritonitis I claim is clinical and practical and aids in diagnosis. Many have written in regard to peritonitis but none that I have noticed have classified peritonitis in the same way that I present it here. The abdominal surgeon quickly becomes familiar with these three great districts of peritonitis. The practical physician soon palpates each of these suspicious regions. Inflammations are astonishingly abundant and frequent in the three regions. We noted with exact care the number who had been afflicted by inflammation in the seventeen autopsies. Twelve had peri-appendicitis (70 per cent). Ten had peri chole cystitis (60 per cent). Four had pelvic peritonitis (25 per cent). (In the females it was sixty per cent). I wish to state here that when there was any doubt in regard to the existence of these inflammations Dr. La Count, pathologist or Dr. Tinen, head interne, distinctly agreed to the pathology. It should be remembered that the seventeen autopsies were adults over 25, and were patients who died in Cook County Hospital. However, it will surprise many to hear that adults possess 70 per cent of peri-appendicitis, 60 per cent of peri cholecystitis. But it is no surprise that 60 per cent of pelvic peritonitis may exist in women; 60, 70 and 60 per cent, are the figures which represent the amount of inflammation of the peritoneum in the great pathologic districts. But it must be understood that much of the inflammation in these three great peritonitic regions is benign. Much of it is what should be called aseptic fibrinous peritonitis. The exudates arising from it simply organize into the bands, adhesions. It must also be stated that the new organizations look like the old peritoneum. They appear to act just like the genuine peritoneum and very often can not be distinguished from natural peritoneum, so that this new organization can trace new nerves, vessels, connective tissue and all that is necessary for living structure. The reason that inflammation occurs in the three great peritonitic regions, viz: pelvis, appendicular and gall-bladder districts, is because infection gains access to them. The open tubes empty infection in the pelvis, the ruptured appendix pours its septic matter into the appendicular district and the perforated gall-bladder allows its toxic substance to invade that region. Thus sufficient causes came into play to induce peritonitis in these regions. Now, as to why inflammation is not dangerous in these places must be explained on physicial and evolutionary facts. The physicial facts rest on anatomical basis. In the pelvis when infection passed out of the tubes the pendent position of the pelvis does not allow the infection to spread, the bony walls hem in the invader, the intestines are not generally involved and motion or peristalsis is limited. In the appendicular cecal region the appendix generally lies and ruptures behind the cecum. It is protected by folds of peritoneum and a large still bowel while it is sheltered from active peristalsis of the small bowel so that perforated appendices do not generally send their septic contents far beyond the adjacent localities.

In regard to the gall bladder region the anatomy of the mesentery of the transverse colon acts as a barrier and the septic matter that perforates the gall-bladder can not mount over the transverse colon. The gastro-colic omentum, the transverse colon and its mesentery are the bulwarks that protect the gall bladder districts. So far as evolutionary processes are concerned, it simply means that these peritonitic regions have become tolerent to inflammations by repetitions through the ages. Ages of repeated inflammation in an organ teaches it to resist. It is the survival of the fittest, *e. g.*, slight infection in the small intestine frequently ends fatally. I present the following classification of the origin of peritonitis:

LANDMARKS OF PERITONITIS.			
	MAJOR REGIONS.	1. At the ends of the Fallopian tubes (Pelvic).	
		2. Ceco-appendicular. (Appendix).	
		3. Gall-bladder. (Gall-bladder).	
	MINOR REGIONS.	1. Sphincters.	*a*. Pylerus. *b*. Ileo-cecal valves. *c*. Anus.
		2. Flexures.	*a*. Hepatic flexures. *b*. Splenic flexures. *c*. Sigmoid flexures.
		3.	Hernial orifices.
		4.	Accidental.
		5.	At the semen sacs
		6.	Upper one-third of ascending colon.
		7.	Perisplenitis.

It is well to remember that the gall-bladder region is a composite region and its inflammation may arise from (*a*) perforation of the gall bladder, (*b*) disturbances out of the pylorous, (*c*) the invasions which come out of the hepatic flexure of the colon.

I observed the kidneys eleven times in the seventeen

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autopsies. The kidneys were measured with regard to the iliac crest. The kidneys are very frequently movable. Several times I could move the kidney up and and down two inches in its bed. One case the kidney was bi-lobed. It had never lost its fetal condition, but remained like the kidney of an ox. In three cases the right kidney was higher above the iliac crest than the left. In four cases the left kidney was higher than the right. The highest kidney on the right side was three inches above the iliac crest. The highest kidney on the left side was two inches above the iliac crest. The left kidney was twice on a level with the iliac crest and the right was also twice on a level with the crest. The kidneys are very variable in position and quite movable in their bed. One right kidney reached below the iliac crest.

In the diagnosis of peritonitis certain symptoms may be of aid. In noting the major and minor localities of peritonitis it simply calls attention to where one should first examine. The surgeon who eliminates the pelvic, appendicular and gall bladder regions in peritonitis shows very practical methods. The other regions arise so seldom that one must count probability as the rule of life. The adhesions in the various major and minor regions are generally not manifest enough to diagnose. The inflammatory products generally become organized and act like old peritonitis, but some become what is known as cicatricial tissue. This cicatricial tissue may result in stricture or malignancy, so that its results are immediate and remote. A few words might be said in regard to the minor regions of peritonitis. At the colonic flexures where the chief features of peritonitis is purely irritation we may expect strictures and less malignancy, while at the sphincters we may first expect malignancy and less strictures. The sphincters have a periodic blood supply and lymph. Their structure is complicated and their function is high, in short they are subject to rapid and frequent changes, which make any structure liable to disease. So far as the point of peritonitis exists at the junction of the upper third with the middle third of the colon, definite proof existed in the autopsies that it was due to the movements of the right lower border of the liver. Several good examples of this type existed in the autopsies. However, it is not very probable that such adhesions would ever produce much serious disease.

As regards the hernial orifices it is common to find old adhesions in any case where hernia has existed. It is almost certain if hernia existed for any length of time, that old adhesions will arise. These adhesions exist through many years. In one case I was called some weeks after hernitomy to find a man of about fifty suffering from bowel obstruction. A week's treatment with high injections of water and air relieved the obstruction. The air injections were the most effective. A case is reported when twenty-eight years after the hernia was reduced, the old adhesions produced fatal bowel obstruction.

In regard to accidental localities of peritonitis, they are quite fatal. Sudden perforations as from typhoid fever are very dangerous, as they nearly all occur in the lower three feet of the ileum, whose peritoneum has not learned to tolerate peritonitis. Another point of accidental peritonitis is while a patient is suffering from pneumonia. The pneumococcus of the pneumonia is found also in peritonitis. Besides it is very plain to see that subjects who have had pneumonia have also distinct peritonitis under the diaphragm. I have observed this repeatedly in autopsies. It may be observed that the persons possessing these remains of local peritonitis likely never know of them, they gave no symptoms which called attention. They come about by slow, insidious processes. The peritoneum is capable of wonderful pathologic conditions compatible with life. I think no case out of the seventeen was entirely free from peritonitis.

A remarkable feature in these seventeen autopsies was the prolapsed condition of the viscera in over ½ of the cases. All of the cases except one would allow loops of bowel to be drawn through hernial orifices, artificially made for that purpose. I think now, however, that such is the normal condition, notwithstanding Treves' statement to the contrary, but the occasional prolapse would suggest that subjects might have suffered from dragging on the visceral nerves, for, it is difficult to conceive how nervous filaments could be so elongated and not suffer damage. It seems that with increased senility that in general progressive visceral prolapse gradually arises. Occasionally the mesenteries were enormously elongated. The prolapse in the parts in the ending of the ilium was so great at times that the cecum and lower end of the ilium would be found at the bottom of the pelvis. In one case the stomach was so dilated that it reached to the brim of the pelvis. Such persons frequently suffer from constipation.

In the seventeen cases I paid especial attention to the inguinal and femoral orifices. It is very evident that the inguinal rings must be looked on as valves. In the infant the internal and external rings are directly behind each other. But as the bones of the pelvis widen during growth of the iliac or femoral artery is carried outward. This necessarily carries the vas deferens outward also, because it passes around the deep epigastric artery. This growth process carries the internal end of the vas deferens farther outward than the lower end. Hence, there is formed in the abdominal wall a valvular opening which tightens by intra-abdominal pressure. The valve is precisely similar to the valve formed by the ureter passing obliquely through the wall of the bladder. The fuller the bladder becomes the tighter becomes the valve. If one will introduce the finger into the internal abdominal ring and then tighten the abdominal wall, the finger will soon perceive the difference. Frequently I could easily introduce one or two fingers into the internal ring, but no sign of hernia existed. In introducing the finger from the inside of the abdomen one simply separates the edges of the valves. The abdominal wall varies very much in regard to her-

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nia. In some the muscles and connective tissue is very limited by absorption. The walls are then tough and fibrous. Frequently many anatomical deficiencies exist around the rings.

A very significant matter is the condition of the peritoneum around the hernial orifices. The peritoneum is banked by a thick bed of spongy connective tissue. The peritoneum lying on the bed of this connective tissue is loose and movable. It slides hither and thither and it is my opinion that much of hernia is due to the loose bed of connective tissue which banks the peritoneum around the hernial orifices. If depressions or puckers arise in the peritoneum near a weak point in the muscular wall of the abdomen it is apt to become the starting point of a hernia.

The spermatic cord generally consists of one artery and two or three veins. It was remarkable in several cases to note the wide rings but no sign of existing hernia. The open or patent condition of the right inguinal ring is remarkably greater than the left, in the majority of cadavers. As age advanced in the cadavers, the rings presented larger outlets, sharper borders. The abdominal walls around the hernial rings seemed to lose their fat, elastic tissue and become more fibrous and stretched into thinner wall. The study of the femoral rings is not so satisfactory as is that of the inguinal in cadavers on account of the sheath of the vein and artery being so close to the femoral ring. I can not say that the femoral openings in the seventeen cases presented a wide variation as to size and resistance. Occasionally only one finger could be passed through the femoral ring and again I could easily pass two by pushing the sheath of the vein outward and Poupart's ligament upward. But no doubt the secret of the non occurrence of hernia, inguinal or femoral, is the transversalis fascia. Besides there is a dense fascia or a thickening of the fascia banked over these rings which seem to avoid the insinuations of peritoneal pouches through the natural openings in the abdominal wall.

In this series of seventeen autopsies all kinds of peritoneal pockets occurred, the intersigmoid fossa, discovered by Hensing in 1844, and found by the spermatic vessels.

The fossa duodeno jejunalis at the junction of the jejunum and duodenum was present in some 65 per cent of cases. It is produced by the inferior mesenteric vein. All the ileo-cecal fossæ were present. The superior and inferior ileo-cecal fossa were constant, but the others were very inconstant.

The conclusions which may be of practical value to the general physician gained in these seventeen autopsies are:

1. Peritonitis is a local disease of very frequent occurrence.
2. Peritonitis is Nature's method of repair.
3. There are major and minor districts of peritonitis with corresponding dangers.
4. That the omentum is the patient's protector, a man-of-war and the surgeon's friend.
5. That 65 per cent of peritonitis arises over the psoas muscle on each side, due in my opinion to the relaxation and contration of the psoas muscle—irritation.
6. That some 15 per cent of appendicitis is found in adults at autopsies.
7. That 45 per cent of peritonitis was found around the gall bladder.
8. That 65 per cent of pelvic peritonitis was found in females.
9. That 11 per cent of pelvic peritonitis was found in man's pelvis due to vesiculitis seminalis.
10. Six out of seventeen showed visceral prolapse.
11. That in man 25 per cent of cœca lies in the pelvis.
12. That in woman 80 per cent of cœca lie in the pelvis.
13. That two out of seventeen cœca were not descended and that such arrest was due to old peritonitis.

A Question of Priority.—The Ligation of the Uterine Arteries for the Cure of Fibroid Tumors and Checking Hemorrhage.

BY WALTER B. DORSETT, M.D., ST. LOUIS.

Read before the American Association of Obstetricians and Gynecologists at Toronto, Ont., September 20, 1894.

Some attention has lately been given to the subject of the ligation of the uterine arteries for the cure of fibromatous growths of that organ as well as for the checking of hemorrhages from other causes. And it seems as each new case is reported interest is again awakened to the future value of the operation. It is for the purpose of establishing one's right to the priority, as well as originality, that I beg the Association's valuable time.

On February 15, 1889, and during the time I was Superintendent and Surgeon in charge of the St. Louis Female Hospital, there was admitted for treatment a patient, aged 28, who presented on examination the most peculiar atrophic condition of internal and external organs of generation. So unique was this case, that I made careful inquiry as to its origin in order to arrive at its etiology.

From a letter from a physician in Terre Haute, Ind., I learned that eight years previous to her coming under my observation she had suffered from an inversion of the uterus immediately following hard labor. This to my mind was the only assignable cause for this condition of atrophy and on this I reasoned. How, and by what means was this atrophy brought about? For in order to treat the case, this question should be uppermost in our minds. Let us consider for a moment the arterial supply to the uterus and its appendages.

The arteries of the uterus are the uterine from the internal iliac, and the ovarian from the abdominal aorta. They are remarkable for tortuous course in the sub-

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stance of the organ and for their frequent anastomosis. The veins are of large size and correspond with their arteries. The uterine artery passes downward in its course from the internal iliac to the neck of the uterus, then upward alongside of the body in a tortuous manner between the layers of the broad ligament.

Now what became of these arteries during the inversion of the uterus? Is it not reasonable to suppose that they were so twisted and turned upon themselves in such a manner as to occlude their caliber, and that in the process of descent and situation of the organ that these functions were so impaired as to longer unfit them for blood carriers, and as the organ was deprived of nourishment, it very naturally atrophied. The same condition followed in the vagina, and from the same cause: an obstruction to the arterial supply. This explanation seems to my mind the only one in this case.

In studying uterine therapeutics, we find that leading men now treat inflammation of the uterus and peri-uterine inflammation by tamponading the vagina, believing that aside from the medicinal agents with which they may be saturated, that much benefit is derived by the mechanical pressure brought about. The rationale of the treatment of fibroids by the use of ergot is to decrease the blood supply to the organ, and on the supposition that ergot contracts the arterioles.

The ligation of the vertebral artery for the cure of epilepsy is on the supposition that the blood supply may be decreased. So also the electro-therapeutist uses his positive or negative electrode to dilate and contract, to congest and to empty. Admitting for a moment that I may be right in the supposition that this atrophy was due to an artificial ligation of the nutrient arteries, I am emboldened to make this statement:

Namely, I believe that in the treatment of uterine fibroids, whether submucous, intra mural, or sub-peritoneal, as well as for chronic inflammations of the organ, to ligate the uterine artery would not be an unscientific procedure. On the contrary, the more I have thought of it, the more I am inclined to believe that it would be the most rational and at the same time most certain mode of treatment. To do this it would not be necessary to open the peritoneum.

Place your patient in the lithotomy position, as if to perform a vaginal hystorectomy, and, if for a fibroid tumor, make your incision alongside of the neck, right or left, as the case may be, according as the tumor may be, to one side or the other; dissect up the tissues till you feel the pulsation of the artery; throw around it your catgut ligature, tie it and the operation in finished.

The collateral circulation is so perfect and extensive, the artery is so easily reached, the after-treatment so simple, I do not see why it may not be done. I made three observations during December, 1889, and January and February, 1890, and reported the case of atrophy of the genitalia and described the technique of the operation of ligation of the uterine arteries for the cure of fibromatous growths, in a paper I read before the St. Louis Medical Society, May 17, 1890, and it appeared in the August number, 1890, of the St. Louis *Courier of Medicine*, this journal being the official organ of the St. Louis Medical Society at that time, and by contract had the exclusive right of the publication of the proceedings of that body. (Aside from a few introductory remarks the foregoing is a quotation from my first paper on the subject read May 17, 1890).

During the month of March, 1893, my attention was called by a medical friend to an article by Prof. Sigmund Gottschalk, of Berlin, in *Archiv f. Gynakologie*, Bd. xliii, Heft 3, in which he reported two cases upon which he had performed a bilateral ligation of the uterine artery for the cure of uterine myoma; both cases were materially benefited. I immediately wrote Prof. Sigmund Gottschalk, a kind and friendly letter, calling his attention to my suggestions embodied in the report of the case of uterine atrophy and sent him by the same mail two reprints from the *Courier of Medicine*.

After waiting a month I wrote him again and again, sent him reprints I have not up to the present time had one line from him in return, not even an acknowledgment of the receipt of my letter and reprints.

When I received the April, 1893, number of the *American Journal of Obstetrics and Diseases of Women and Children*, I was naturally surprised to see on the first page an article by Dr. Franklin H. Martin, of Chicago, entitled, "Vaginal Ligation of a Portion of the Broad Ligament for the Treatment of Uterine Tumors and Hemorrhage." Upon careful study I soon found that the operation delineated in this clearly written article was practically the same operation I had advocated in my paper May 17, 1890, or two years and eleven months before. The technique of the operation so described was precisely the same, the position the patient was to occupy during the operation was the same, in fact it only differed from mine in that a portion of the broad ligament and in some cases the ovarian artery was included in the ligature, this last, the ligation of the broad ligament, which of course includes the nerves and lymphatics; in short everything contained between the anterior and posterior layers of the peritoneal roof, I take it as a totally useless and dangerous addition to the simple ligation of the artery, and to my mind could not affect the growth of a myomatous tumor, beyond the simple strangulation of the artery as is accomplished in including the artery alone in the ligature.

Upon seeing this article and reading the technique, I immediately wrote the editor of the *Journal*, and called attention to my work in this direction. In the following number appeared my letter, together with a communication from Dr. Martin (I having previously written him a private letter enclosing a reprint of my original paper). In this letter he acknowledges the receipt of my letter and claims that his operation differs from mine in this. Quoting a portion of the letter, he says to the editor, "Will you kindly call attention to the fact that the idea of his (Dr. Dorsett's) operation, is limited compared to mine, inasmuch as he advises simply the ligation of the uterine artery, while I advise ligating as

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much of the broad ligament as possible without usually including the ovarian artery, but under desperate circumstances also including the latter blood channel in suitable cases."

My idea being to cut off the nerve supply, with the object in view of producing profound shock and considerable change of nutrition. Further on he says, "My operation is distinct from his in idea and execution, being ligation of the broad ligament from the *vagina* (italics mine) while his as published was simply a suggestion that the uterine arteries be ligated for uterine fibroids."

The above declaration was met by me in my letter to the editor, in the following language: "When we talk of ligation for checking hemorrhage or for the diminution of growth of tissue, be it physiological or pathological, we naturally presuppose that we are to ligate a feeding vessel alone and not nerves, lymphatics, connective tissue, etc."

And further on I say: "In the discussion of the subject, he (Marion) draws attention especially to the liga tion of the uterine artery and directs the operator as to the importance of feeling for the pulsation of the ves sel." Why, may I ask, should he advise feeling for the artery when all the structures are to be included in the ligature?

Again he hardly does me justice when he says, "My operation is distinct from his in idea and execution, being ligation of the broad ligament from the vagina." Did I not, allow me to ask, lay some considerable stress upon the position the patient was to be placed in, when I said to do this it would not be necessary to open the peritoneum? "Place your patient in the lithotomy position, as if to perform a vaginal hysterectomy, and if for a fibroid tumor, make your incision along the side of the neck right or left, as the case may be, according as the tumor may be on one side or the other. Dissect up the tissues, till you feel the pulsation of the artery, throw around it your catgut ligature, tie it and the operation is finished."

This certainly implies that the artery is to be reached through the vagina. Now I claim that the ligation of the artery alone is the rational treatment, and is all that is necessary under ordinary circumstances, and to add to it the ligation of the broad ligament, or a part thereof, does not materially effect a change in so far as the ultimate result to be sought in such cases, viz., a starvation and a consequent atrophy of the fibrous growths And if for chronic inflammations or hemorrhage to ligate the artery alone is all that is necessary.

In the *American Journal of Obstetrics*, June, 1894, Vol. xxix, No. 6, appears a letter to the Secretary of the Chicago Gynecological Society from Prof. Gottschalk, claiming priority as to the operation and technique of the uterus arteries.

He having seen the reports of Martin's cases in so prominent a journal as the *American Journal of Obstetrics*, thinks that he has been robbed as it were of his laurels, and claims that the ligation of the uterine arteries was first suggested by him in his article at the International Congress, held at Brussels, September 16, 1892, while I read my suggestion and technique May 17, 1890, or two years and four months previously and two years and nine months before Martin's name became associated with the procedure.

Dr. Martin does me the honor of acknowledging my priority as to the suggestion, but because he first published the execution as an operation *per se* (notwithstanding the fact that he calls it the ligation of the broad ligaments), claims that the operation should be called Martin's operation, I submit that, to this he is not entitled.

My own experience, while not extensive, has demonstrated just what I predicted in my original and first paper in May 1890, now more than four years ago. I have performed this operation four times, once for hemorrhage, consequent upon an obstetrical laceration of the cervix. Once for persistent and uncontrollable hemorrhage due to carcinoma of cervix and body of the uterus, and twice for uterine fibroids. As to the two last mentioned cases the length of time has not been great enough to cause an entire obliteration of the neoplasms, and hence I have not as yet reported them as cures. I will say, however, that the first operation on a fibroid cancer was made three years and nine months ago upon a negress aged 22. The tumor being a partially sub-peritoneal and intra mural fibroid situated on the anterior and middle segment of the organ and by its pressure seriously interfering with the functions of the bladder. As near as I could tell by the bimanual touch it was at least four and a half inches in diameter and was of an oval shape. This patient three months after the operation experienced entire relief from the bladder symptoms and an entire cessation from other pain in the uterus itself. And upon examination recently made the tumor does not measure more than one-half inch in diameter.

The second case of fibroid was a submucous tumor, one in which persistent and uncontrollable hemorrhage was the annoying feature. She was a washer-woman, aged 38 or 40, who was compelled to earn her own living by hard work. I cannot give the history of this case to date as she has removed from St. Louis and I could not trace her. Suffice it to say, however, the hemorrhage ceased in frequency and was materially diminished in quantity.

Stab-Wound of the Pericardium.—Resection of Rib.—Suture of Pericardium.—Recovery.

BY H. C. DALTON, M.D., ST. LOUIS, MO.

Read before the St. Louis Medical Society, February 2, 1895.

The caption of this paper would give a better idea of its contents, had I given it the title, "Stab-Wounds of

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the Thorax," for, in addition to the history of the case of pericardial injury, I discuss thoracic stab wounds in general.

Eugene L. entered the City Hospital September 6, 1891, with the following history:

One hour before admission, while engaged in a fight, he was cut in the left breast, the injury being followed by a feeling of faintness and nausea. When admitted to the hospital, a wound an inch in length was found an inch and a half above the left nipple. There was little hemorrhage from the wound. Percussion showed normal cardiac dullness. The percussion of the chest showed absence of dullness. The wound was closed and a dressing of antiseptic gauze applied. Temperature was 99.5° F., pulse 110, respiration 20.

Ten hours after admission to the hospital temperature was 101, pulse 112, respiration 40. Percussion now gave dullness over entire left side; respiration was superficial. The patient complained of considerable pain. He was taken to the amphitheater and the dressing removed. As soon as this was done, blood and air gushed from the wound with each inspiration.

An incision, eight inches in length, was made over and parallel to the fourth rib, and *six* inches of the rib resected.

The bleeding intercostal artery was tied. The pleural cavity was full of clotted and fluid blood, which, with each inspiration, gushed from the wound with alarming force. By turning the patient on the left side and using a long pair of forceps armed with a sponge, I was enabled to remove the blood from the pleural cavity.

The patient was turned on his back, and by the aid of strong retractors, a transverse wound of the pericardium, *two* inches in length, was revealed. At the inner angle of the wound the pericardium was penetrated to the extent of half an inch. The balance of the wound failed to penetrate the cavity.

By the use of two pairs of long forceps, I was able to grasp the pericardium a little beyond each angle of the wound, and draw it well up into the surgical wound. Of course, the pericardium would rise and fall with each pulsation of the heart. With a long needle holder, armed with a sharply curved needle and catgut, I was able, with very great difficulty, to close the pericardial wound with continuous suture. Great difficulty was experienced in following the up and down movements of the pericardium, caused by the heart pulsations. After many attempts, I finally succeeded in closing the wound. The pleural cavity was thoroughly irrigated with hot sterilized water, the surgical wound closed, and an antiseptic dressing applied, over which was placed a cotton bandage, followed by a crinoline bandage, the latter being firmly applied. No drainage was used.

At the end of the operation, which consumed an hour, the pulse was 140, respiration 60. During the operation the respiration was very labored. One hour thereafter, the pulse was 100, temperature 99, respiration 28. At several stages of the operation the patient seemed to be dying; hypodermic injections of whisky and strychnine were then employed.

Before closing the pericardial wound, I inserted my index finger, but could not discover that the knife entered the heart. There did not seem to be an unusual amount of fluid in the pericardium, hence I did not believe that it contained blood; however, no extended examination was made in this direction, as the patient's condition was so grave as to necessitate the completion of the operation at the earliest moment. The pericardial wound was not bleeding.

The patient made an uninterrupted recovery. In fact, there was little of interest to record in the subsequent history of the case.

With the exception of three other cases, my experience in operating for stab wounds has been confined to the abdomen. When such wounds penetrate the abdominal cavity, we would be inexcusable, aye, criminally negligent, did we not enlarge the opening and *see*, not guess at, the existing condition. But in stab wounds of the thorax we would not be justified in opening the cavity, without the supervention of grave symptoms, such as hemorrhage, dyspnea, rapid pulse, etc. The presence of hemorrhage can readily be determined by percussion. It must not be forgotten, however, that, like the peritoneum, the pleura can take care of a good deal of blood; therefore, unless other grave symptoms arise, operative interference would not be indicated.

In my experience at the City Hospital, I saw a number of cases in which almost the entire pleural cavity was filled with blood, after gun-shot, stab or other wounds, the patients recovering without operation.

In stab wound of the thorax, the rule of non-interference without grave symptoms would not hold good, if such injuries be low down. Here we may have the knife blade passing through the diaphragm and wounding abdominal viscera; for, as we all know, such injuries may exist with few, if any, grave symptoms. In such cases it would be the part of wisdom to resect a rib, and thoroughly inspect the contiguous diaphragmatic surface. This we can readily do, anteriorly and laterally, but I imagine we would experience great difficulty should the wound be in the back. Should peritoneal penetration be established, we should make a *two-inch* incision an inch below the costal border. This would enable us to remove and inspect the viscera in the vicinity of the wound. Should the blade penetrate the convex surface of the liver, the better procedure would be to enlarge the diaphragmatic opening and sew up the hepatic wound. As I have pointed out in several papers, in closing wounds of the liver it is necessary to use a sharply curved needle armed with heavy catgut, taking care to enter the needle an inch from the edge of the wound, passing it in as deeply as possible, and bringing it out an equal distance on the opposite side. In tying the catgut, it is very important not to tie it too tight, simply tightening it sufficiently to bring the lips of the wound in apposition. Tying the suture too firmly would,

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of course, result in cutting through the very friable liver tissue.

In the *Journal of the American Medical Association*, November 15, 1890, will be found the report of a case in which I did this operation successfully. In addition to the hepatic wound, the patient received a stab wound of the ileum, which was closed in the usual manner. In the *Medical Mirror*, the date of which I have forgotten, will also be found a report of a case where I followed this rule in dealing with a wound of the left side. In this case, the knife passed through the thorax, diaphragm, and into the spleen. The resection of the rib in this case revealed omentum protruding through the diaphragm. An incision, four inches long, an inch below the costal border, disclosed a wound of the spleen, which was closed with catgut suture. Both of these patients recovered.

This case, with its treatment, it seems to me, presents several important and interesting features, and I believe that some useful lessons may be drawn from it. Regarding the case, we are struck with the absence of what are usually considered classical symptoms. There was no cough, no dyspnea, no increase of cardiac dullness over the lung. Shock was moderate or altogether absent; temperature was very slightly elevated, and pulse was accelerated, but both these facts might have been accounted for by the excitement and late violent exertion of the patient. The severe hemorrhage from the fourth intercostal artery came on several hours after the injury, and then we find temperature, pulse and respiration all increased. The bleeding vessel was easily caught and tied, after removal of a considerable portion of the rib. Just here the question of selection of a method for control of such hemorrhage might have come up. This might have been possible by packing, by compresses, by ligature thrown around the rib, or by a combination of these methods. But the chest cavity was filled with blood, and the patient in imminent danger from that source, as well as from a continuation of the bleeding. Then, too, we did not know that the bleeding came from the severed artery alone. This fact was made our warrant for a large opening through which the effused blood could be removed, and pressure upon the lung and heart removed. This object was easily and rapidly accomplished.

It was at this point in the operation that the wound in the pericardium came into view, and demanded its share of attention. I might have let it alone, and trusted to Providence, luck, or adhesions to shut it off from the injured pleural cavity, and prevent its possible infection by that route. But adhesions are at best uncertain, and an adherent pericardium usually uncomfortable.

I had no precedent to guide me, no authority to uphold me, in attempting to sew up this wound over a heart that was beating at the rate of 140 per minute. However, I thought then, and still think, that my patient had a better chance for recovery after the wound was closed. Not only this, but I am sure that his chances for complete restoration of the cardiac functions were a great deal better than they would have been if his wound would have been allowed to take its own course, and had fastened itself to the first organ that presented.

Medical literature seems to be particularly barren upon this particular form of injury. Most of the standard text-books dismiss the subject of wounds of the pericardium with a line or two, merely saying that such wounds are usually followed by pericarditis. Yet, I doubt if these injuries are so rare, or so unimportant, as this would seem to imply.

In my own case a few points seem worthy of further remark. When first seen, an hour after the injury was received, no evidence of severe hemorrhage was noted. It was ten hours later before decided symptoms of trouble, enabling us to make a positive diagnosis of a penetrating wound of the chest, developed.

The wisdom of closing the pericardial wound may be questioned. The considerations which led me to adopt that course, were dangers of infection from the pleural cavity, and prevention of adhesions, either to rear wall or pulmonary pleura. The result seems to fully justify the rather difficult and prolonged manipulation.

Without such closure I think the patient *might* have recovered, but certainly his chances for complete recovery without a crippled heart were vastly improved by immediate and aseptic suture of the pericardial wound.

My thanks are due Dr. Greenfield, Assistant Superintendent, and Dr. H. W. Bond, Senior Assistant, for valuable assistance during the operation.

Salpingitis and Cystic Degeneration of the Ovaries.—With Report of a Case.

BY ROBERT FUNKHOUSER, M.D., ST. LOUIS.

Read before the St. Louis Medical Society, February 9, 1894.

Any one who has had experience with these cases, salpingitis alone or with other pelvic inflammations, realizes that they are exceedingly prevalent, and each day adds to the increasing number. Judging by the present, the conclusion is warranted that it is no new disease, but its frequency has been overlooked until comparatively recently. I think I, and no doubt others, can recall cases of this character in practice, in which the true condition has not been recognized. The sexual relations between men and women have not been materially altered since their advent on this planet, nor has human physiology or pathology been changed, so far as our present knowledge goes. Their, habits, uses and abuses, in this relation, have not been materially different. The same causes that produce the disease now, have always existed; the *puerperal* (under this head may be classed attempts to prevent conception and the production of a portion which are by no means infrequent), and specific infection.

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I present this specimen, which is one of double interstitial salpingitis with pus, and cystic degeneration of the ovaries, not because it is rare or of especial interest, but merely as a type of a class of cases that are met with so frequently, and because the history serves to bring out some very interesting points and emphasize some facts in connection with them.

I believe that inflammation of the uterus and adnexa begins, in all cases, in the endometrium and spreads, the inflammatory changes affecting the parts differently in each case, spending its force on the tubes in some, in others extending to the ovaries, cellular or serous tissues; but generally, when one tissue is attacked, all are more or less involved. I am not inclined to think that the extension is ever solely conducted by the lymphatics, but that the chief channels are through the mucous membrane of the uterus and that of the tubes. In this case, as in so many, almost all the disease is bilateral, though the anatomico-pathological changes are not equal, the changes depending upon the length of time of the disease, the causes, the severity and the frequency of the attacks.

In some the walls have undergone muscular hypertrophy or atrophy, changes that generally occur in inflammations. The tubes present various shapes, being unevenly distended, containing cavities which project almost to the serous covering. These cavities, it has been supposed, are channels through which the sepsis may be carried to the serous surfaces, lighting up inflammatory conditions which may do more or less mischief. The sepsis usually finds an entrance through the natural opening of the fimbriated extremity. An examination of the specimen will explain, by its anatomico-pathological changes, one of the almost universal symptoms of this class of cases, sterility; and which the majority of patients do not seem to appriciate, and to which their attention has not been directed. This symptom is very noticeable in prostitutes, and persons exposed to the same conditions, who are prone to interstitial salpingitis and oophoritis—especially the latter, acting in time upon the former, no doubt, favored by the excessive functional activity of the erectile tissue of the ovary, especially at the hilum.

The repeated attacks of inflammation, which many times are of a subacute nature, produce alterations in the parts, welding the adnexa into one mass, binding them down immovably, in many instances, producing the different appearances so graphically represented by the terms "spider web," "bread and butter," "plaster-of-Paris," etc., varieties of adhesions. This inflammatory action is very marked on the surface of the ovary, producing a thickening and alteration in the epithelial layer, which, with the changes in the stroma consequent thereon, will account for the cysts that you here see in the specimen. The altered stroma increases at first at the expense of the follicles, some of which become aborted, others opening into each other, producing cysts of various sizes; shape and number, so charateristic of these cases, and finally the organ atrophys. Colliquative necrosis of the Graafian follicle and its contents progresses by the pressure of its contents, its rupture being prevented by the altered external envelope of the ovary producing dropsy. Frequently some of these cysts undergo suppuration, as, indeed, it is not uncommon for the inflammatory action in the tubes to end in pyosalpinx. Indeed, some authorities go so far as to affirm that in all cases of salpingitis, especially of the interstitial variety, pus is present. Such has been my observation so far. These cysts—in this case from 12 to 15 in each ovary, varying from the size of a pin head to that of a small chestnut—have not been classed with the classical tumor of Rokitansky, where the cysts were more or less prominent, larger than seen in the specimen. These, in the opinion of Rokitansky, Tait and Ritchie, are Graafian follicles, and each contain an ovum. Upon examination, I have failed to find an ovum in any of the many cysts from various specimens similar to the one seen here, the contents being principally albuminous, although I do not doubt that they were at one time contained therein. Whether the simple or follicular tumors are to be considered as hydrops folliculi or multiple, "implying a supposed origin from a concomitant distension of separate follicles, or multilocular, as a result of a "diffuse invasion of the ovarian stroma by the glandular process," I believe, in either case, the change is the result of follicular atrophy, producing follicular dropsy. And if we accept the position of Waldeyer, Belfour and Minot, that in the development of the ovary the follicular epithelium is derived from the germinal epithelium, and not from the stroma, according to Toulis, it makes little difference whether the origin of these pathological changes is in the cells or ureier of the ovarian sexual cords, known as Pflueger's cords, in the adult; whether they be ingrowths from the mesothelium, or survivals from a very early stage, or the more or less typically mature Graafian follicles; in either case there is a process of interchange between the ovarian stroma and the epithelial elements. The ovaries, as a result of these inflammatory changes, exhibit the oophoritis, cystic degeneration, hydrops folliculi, cicatricial contraction and atrophy, with the disappearance of the glandular structure. Even the, so-called, slight attacks of catarrhal salpingitis are not so devoid of mischief, since the ciliated epithelium is destroyed, predisposing to ectopic pregnancy and even closure of the fimbriated extremity, more frequently than has been supposed. While the septic infection is due to the various streptococci and staphylococci, in the specific variety there is a mixed infection, the inflammation, in the main, being always the same. Whether the latter cause is overrated, I am convinced that the gonococci remain a very long time in the male urethra, even after the disease is apparently perfectly cured. In these cases, I do not believe that there is any other treatment than removal. Even supposing that the tube has been emptied by any of the various methods of dilatation, currettage, etc., the adhesions remain, the parts are immovable and the ovaries diseased; the condition has not been

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materially improved. Massage will be of no benefit, on the contrary, is dangerous.

The patient from whom the specimens were removed, was 25 years of age. Six months before their removal, viz: last August, she had typhoid fever. Previous to that time, for four or five years, she had sufferred with intense pain in the region of the tubes and the ovaries, intensified at the menstrual epoch. She was emaciated, presenting the peculiar pinched, suffering face, so common in these cases, and her temperature was above the normal. One symptom was very noticeable in this case, which I have met with in others, viz: expulsive efforts, which eventually, in some instances, I believe, lead to prolapsus of the uterus in the various degrees. These expulsive pains are, no doubt, Nature's efforts to get rid of the contents of the tubes, which are so constructed anatomically by the arrangement of the muscular fibres as to facilitate emptying the contents, but the ends being sealed up, prevents the discharge; hence the repeated pains and contractions, most painful and violent during the menstrual period. The contractions, the confined contents of the tube and the inflammatory process account for the various shapes that are met with. The tubes, ovaries and broad ligament were firmly matted together, necessitating a breaking of the adhesions, and consequently an extensive surface was denuded and considerable oozing followed.

The sexual feeling of this patient was unaltered, with this difference, that after recovery from the operation, she suffered no pain and increased in weight. From observations on a number of cases, I find that when the patient experienced the sexual feeling before the operation, it is unaltered afterwards. If, however, the patient was deficient in feeling during her illness, even though previously to it in a state of health she experienced sexual feeling, after the removal of the adnexa, the sexual feeling did not return.

Physicians.—Dr. J. U. Hall, one of the editors of the *Colorado Climatologist*, offers as the causes of the increase of suicide among physicians, first, the proneness of medical men to resort to artificial stimuli when overworked; and, second, the overcrowding of the profession wereby the struggle for existence is made so bitter that many conclude that life is not worth living. In his own State, as member of the Colorado Medical Licensing Board, Dr. Hall has helped to license 2,066 physicians since 1881. The total population of Colorado by the census amounted to only 442,000. Thus they have in fourteen years licensed one physician for every 213 inhabitants. Dr. Hall adds. "It is needless to say that a large part of these have moved on, and are now trying to find a still easier place. If all had remained, we should have died for lack of sufficient oxygen to support us"—an alternative less objectionable only than suicide itself and no less deadly.—*Jour. of the Am. Med. Ass'n.*

EDITORIALS

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The Newly Discovered Element of the Atmosphere.

That the air we breathe contains, besides the gases so well known by everybody, viz: oxygen, nitrogen and carbon dioxide, another gas, discovered by Lord Rayleigh and Professor Ramsey, seems now to be a well-established fact; for, when the discoverers read their paper before the Royal Institute in London, everybody present was convinced of the existence of the new element in the atmosphere by force of the arguments and evidence produced by the authors of the paper and, moreover, the new discovery has stood the test of close investigation by other most reliable physicists and chemists. The extreme inertness of the new element, to combine with other elements, has suggested its name, argon, from the Greek an-ergon.

The possible presence of some unknown gaseous element in the atmosphere has been suspected by other investigators and, with the present facts before us, it appears strange that a systematic investigation like that conducted by the combined labors of a chemist, and a physicist, has not been undertaken long ago, particularly, as the object of this investigation constitutes the most important factor in the existence and maintenance of vegetable and animal life.

As early as 1788 Cavendish expressed doubt, that the nitrogen of the air was a single element. For when,

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after its isolation from air, it was oxidized by the electric spark, a gas was left which Cavendish suspected not to be identical with nitrogen. He had even measured the residue of the gas and found it to be the 120th part of the whole isolated gas, which proportion seems to coincide with the relative quantity of argon in the tamosphere.

The probable existence of this new element has since been forgotten for more than a century, until a short time before its final discovery by Rayleigh and Ramsey, it had been observed that the density of nitrogen, expelled from chemical compounds, was about one-half per cent lighter than atmospheric nitrogen.

The new element is obtained by freeing the air, from which carbonic acid and water have been removed, from oxygen by means of red-hot copper, and then absorbing the nitrogen by means of metallic magnesium heated to redness, by which magnesium nitride is formed. The residual gas is argon. Chemically derived nitrogen leaves no such residue. Although argon leaves two different spectra, it has been shown by Olszewski that it has a definite melting and boiling point and a definite critical temperature, so that it is in all probability a single substance and not a mixture.

The density of argon is twenty; hence its molecular weight must be forty. Its atomic weight is, like mercury, in all probability identical with its molecular weight, because there are indications, that its molecule contains but one atom. Four volumes of this gas are soluble in a hundred volumes of water, so that it is about two and a half times as soluble as nitrogen, and therefore possesses about the same degree of solubility as oxygen. On account of the physical properties of this new element it is possible that it may play some role in physiological processes, and many questions will naturally suggest themselves to the physiologist and therapist; some of these we find already formulated by the *Lancet*, viz: 'Does the presence of argon affect the phenomenon of respiration or of the assimilation of food material by plants? Would not its solubility in water, which is greater than nitrogen and equal to oxygen, lead to its transmission through the moist membrane of the lung, and, if so, what part does it play in the physiological processes in man upon which his very existence depends? Does its alternating presence in the air possibly account for the bracing influence of sea and mountain air, and are the benefits of balneo-therapeutics, *inter-alia*, to be ascribed to argon? Is it nitrogen or argon that is disengaged from certain warm mineral waters, as those of Buxton."

We have no doubt that many investigations will be conducted in the near future by physiologists and therapists to answer some of these questions. The very fact, that this new element is a constituent of a mixture of gases that make up our atmosphere, which is of such a paramount importance in its bearings upon all the processes of animal and vegetable life, stamps the new discovery with a significance, which can not be attached to that of any of the new elements discovered in the last few decades, and whose scope it will only be possible to determine when similar questions, as those quoted above, will be conclusively answered.

Cremation Indorsed.

Much has been said in favor and against cremation of the dead. Objections to this method of disposing of the dead have been made on account of possible medico-legal difficulties in criminal cases, also for sentimental and religious reasons. But whatever the objections to it may be, it seems that in some sections of this country it has come to stay. We learn from the *Journal of the American Medical Association* that *Florida Health Notes* begins, in the January, 1895, number, a collection of original contributions and extracts "bearing on the discussion and growing practice of this disposition of the dead"—to wit, cremation. It learns that the crematory in San Francisco is so crowded with business that it has to refuse three out of ten offerings made; and a sanitary conference, composed of more than one hundred physicians from all parts of the State, recently passed a resolution declaring emphatically in favor of cremation and urging that it should become the national method of disposing of the dead. In Boston the records of the Massachusetts Cremation Society, whose crematory is near the Forest Hills Cemetery, show that up to June 1, 1894,—that is, five months after the opening of the crematory—there were forty incinerations, the number constantly increasing each month. In May there were sixteen in all. "Socially considered, all classes of people have been represented in this new mode of disposing of the dead here, and all—from 94 to 5 years—figure in the official entries of cremation. The system is a perfect success, and the average time required for the complete reduction of the body to ashes is about one and one-half hours."

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, February 2, 1895; the President, F. D. MOONEY, M.D., in the Chair.

***

DR. H. C. DALTON read a paper (see page 166) entitled,

STAB WOUND OF THE PERICARDIUM.—RESECTION OF RIB.—SUTURE OF PERICARDIUM.—RECOVERY.

DR. W. B. OUTTEN considered the paper a most excellent one, one that ought not to be passed over un-

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noticed. It indicates that when a man has the ground work of a thorough knowledge of the principles of surgery, this, with good common sense, will give him good results. It is only once in a very great number of cases that we meet conditions of this kind, and the essayist treated it in the best possible manner. Speaker, too, thought that the patient had a better chance of recovery with a sutured pericardium, than if the sac had been left open, and he would have treated it in precisely the same manner. The doctor is to be complimented on the result.

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Stated Meeting, Saturday Evening, February 9, 1895; the President, F. D. Mooney, M.D., in the Chair.

***

Dr. T. C. Witherspoon presented two pathological specimens for Dr. Young H. Bond.

The first was a "Bilateral Pyosalpinx," taken from a woman, 21 or 22 years of age. The beginning of her trouble dated back two years, and although her menstruation was comparatively regular since that time, it was accompanied by considerable pain, and the discharge was considerably increased in quantity. She had also had repeated attacks of so-called pelvic peritonitis, one of which occurred about four weeks ago.

In the case of the left tube there were few adhesions, and the fimbriated extremity was not turned in. Upon raising the tube, to allow the operator to pass the ligature around it, about fifteen drops of thick, gummy pus escaped from the outer opening. This accident suggests a point in treatment. Is it not possible that the contractions, occurring after curetting and packing of the uterus, would, in a case like this one, force the pus into the peritoneal cavity?

The pus in the right tube did not occupy the whole tube, but was located in its outer extremity and extended into the peritoneal cavity, being walled in by the peritoneum itself. In a case like this, drainage of the tube by packing the uterus would be out of the question.

A small cyst was found in the right ovary, but it was not determined whether it was a Graefian follicle, or from a corpus luteum.

The second specimen was the sac of a "Papillomatous Cyst." The trouble began about two years ago, when patient noticed an enlargement of the abdomen. She was put under a systematic course of treatment by electricity, but the tumor continued to enlarge very rapidly. At the time of operation, the abdomen had attained to the size of a nine months' gestation, and a bucket and a half of muco-purulent fluid was removed from the sac. There were but few adhesions, and these were found posteriorly.

Patient also had a commencing nephritis, which has been described as incidental to all abdominal tumors, and an enlarged heart, probably due to abdominal pressure.

Dr. Hugo Summa did not think that the contents of a salpingitis is ever forced into the pelvic cavity. The arrangement of the muscular fibers of the tubes is exactly the same as that found in the vessels. We have circular and longitudinal fibers, and the peristaltic movements are such as to propel the contents of the tubes towards the uterus, and not in the opposite direction.

Dr. Witherspoon agreed with Dr. Summa, in regard to the peristaltic movements of the tubes, and this undoubtedly results in an increased lumen at the uterine end with a flow of the contents in that direction. But in this case the narrow, constricted, confined portion of the tube was towards the uterus, while the abdominal end was widely open. He thought that the lymphatics are the channels through which the infectious material is usually carried to the abdominal cavity, but there are some instances in which the slightest pressure on a tube would be followed by an oozing of pus into the abdominal cavity.

***

Dr. Robert Funkhouser read a paper (see page 168) entitled,

Salpingitis and Cystic Degeneration of the Ovaries.—With Report of a Case.

Dr. H. C. Fairbrother said that if the character of the inflammation is the same, whether caused by the gonococcus, the streptococcus, or a specific puerperal infection, it becomes a matter of some importance and difficulty to make a differentiation between the causes in individual cases. This was brought to his mind rather forcibly in a recent fatal case of puerperal peritonitis, in which he came to the conclusion that the puerperal trouble was produced by the midwife, who carried the infection to the patient from another case of simple salpingitis.

Dr. A. R. Kieffer has a case of hystero-epilepsy under observation at present, and has been considering the propriety of establishing an early menopause, in order to stop the epileptic seizures. This is the course that has been recommended by several surgeons and neurologists in consultation. The patien ; is a young lady, who has epileptic seizures beginning a few days before the menstrual flow and lasting three or four days. An aunt of the patient was similarly afflicted during the whole period of her menstrual activity, but the attacks ceased when the menopause was established. She was left a mental wreck, however. The question to decide is the propriety of removing the ovaries with a view of controlling the epilepsy, and the effect on the sexual feeling produced by such an operation.

Dr. Funkhouser.—It does not follow that because the menopause is established, there will no longer be sexual feeling. We know that many women have passed the menopause, and have had sexual feeling for many years afterwards.

Dr. Kieffer.—Would this congestion, that is produced at the menstrual period, take place after the establishment of an early or premature menopause?

Dr. Funkhouser.—As far as the flow of blood from the Fallopian tubes and uterus is concerned, that, I im-

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agine, would be changed. So also, as to the irritability that is present at that time; but these are different things from sexual feeling.

Dr. Hugo Summa, referring to Dr. Fairbrother's suggestion, said that gonococci are not present in the pus of a salpingitis due to gonorrheal infection, except in very extraordinary cases. It was formerly thought that when a woman is once infected with the gonococcus, it would continue to grow, or be transferred into the lymphatics and interior parts of the uterus and peritoneum, and that the resulting salpingitis would be due to the gonococcus itself. Not until about two years ago was the first case found in which the gonococci were demonstrable in the peritoneum; and most cases of so-called gonorrheal salpingitis are due to a mixed infection. The staphylococci or streptococci can be demonstrated in most cases, and the pathological changes are the same.

Dr. L. H. Laidley recently had occasion to look into the subject of causal influences of peritonitis and salpingitis, in connection with a damage suit, in which it was alleged than a fatal peritonitis was produced by cold, to which the patient was exposed by the carelessness of a nurse in letting down a window.

The matter of cold is not mentioned by the authorities, and the causes of peritonitis may be narrowed down to two; namely, traumatism and infection by microorganisms. It is very important to settle this matter definitely, however. In the case referred to the infection was undoubtedly carried to the patient by the doctor himself, and was transferred through the uterus into the abdominal cavity.

This latter mode of infection was practically demonstrated about ten days ago, in a patient, 24 or 26 years old, who had committed an abortion upon herself. When seen the first time, the abdomen was tympanitic, she had repeated chills, and the vomiting usually present in the last stages of peritonitis. The os was patulous, but the uterus could not be examined on account of the great distension of the abdomen. Laparotomy was done, and a diffuse, suppurative peritonitis found, complicated by double pyosalpingitis The cavity was irrigated and packed. The case has progressed favorably, and the patient is now out of danger.

Dr. Funkhouser said that interstitial salpingitis is due, in every instance, either to septic or specific infection. The symptoms are the same in both instances, and just as severe; and the pathological changes no not differ in either case.

Gonorrheal salpingitis is specific, although it is usual ly the result of mixed infection. The gonococcus is demonstrable in the pus only in very rare instances.

It is questionable whether the pus ever flows into the abdominal cavity through the fimbriated extremity of the tube, as that portion generally becomes closed at a very early stage of the trouble.

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Dr. George F. Hulbert reported the progress and result of the case of "Cholecystectomy," which he presented to the Society on January 5. The operation terminated fatally, and it was for the purpose of determining the indications for cholecystectomy in general, and the cause of the fatal issue in this particular case, that he presented it for discussion.

The operation lasted about one-half hour and was followed by considerable shock. The extremities were cold, the pulse was weak, and it was necessary to give saline injections and employ hypodermic stimulation. Reaction took place promptly, and an hour later the pulse was 90, and temperature 98° F. At 12:20 P.M., on the following day, the temperature was 99.2° F., and the pulse 74. The operation was done on January 5, and on January 9, the temperature ranged between 98.4° and 99.4° F. After this the pulse began to decline in strength and volume and increased to 127, 120, 125 and 142 beats per minute a few hours before death. The pulse was hard and wiry, and at no time after the operation did it attain its normal volume and tension. Only once, after the use of calomel, given in the endeavor to get some relief, did the pulse assume tone and become compressible.

Within an hour after the operation, and as soon as the patient gave evidence of reaction, she became nauseated. The nausea persisted and gradually became incessant. Eight hours after the operation she began to vomit bile, which continued and amounted to over a gallon between the time of operation and death.

The mental condition continued good, and her courage was remarkable. She did not think that she was going to die, until a short time before death.

Thirst was excessive, and large saline injections were given for its relief; also to supply a larger volume to the blood. She was not restless, nor did she appear to be suffering very acutely.

One point of particular interest was the strong urinary odor in the salivary secretion, which was particularly noticeable forty-eight hours before death. The action of the kidneys was excessive in the beginning of the case, patient having a desire to pass urine every hour for nearly forty eight hours. It was not unusually dark in color, nor was the quantity markedly increased. During the latter days of her life the quantity became very much diminished and amounted at last almost to suppression.

At no time was there any evidence of peritonitis. The wound was dressed three times, and no sepsis was discovered.

In regard to the vomiting, speaker said he had had three cases of this character. One of these was due to a systemic septic infection. The patient began to vomit soon after the operation and continued until death.

The post mortem examination in this case was made by Dr. George W. Broome, who reports as follows:

I made a post-mortem at the Woman's Hospital upon the body of a woman, about three hours after death. Upon inspection the body seemed to be greatly emaciated. There was no post-mortem rigidity. The abdomen was opened by an incision carried through the

median line and extended around and beyond the surgical wound which had been made to expose the gall-bladder. A flap, consisting of the entire abdominal wall, was reflected downward and to the right. Slight adhesions were found between the surfaces of the viscera and parietal peritoneum in the vicinity of the incision. The field of operation was entirely shut off from the abdominal cavity by the omentum and adhesions. A drop of pus was forced out of one stitch hole by firm pressure of the finger, onto the under surface of the flap. The flaps of the wound were slightly separated, notwithstanding there were several interrupted sutures in situ.

Upon examination of the stump of the gall-bladder, the ligature was found firmly tied, and, together with the stump, free from infection. The stump itself was edematous and boggy, and adherent to its entire surface was a small black coagulum. The hepatic and common ducts appeared to be free from the presence of any foreign body. The macroscopical appearance of the liver indicated that it was healthy. The stomach and duodenum were delivered and found to be free from any apparent lesion. The stomach, however, was seen to be abnormally large. The duodenum was inflated with gases, and its lumen was also unusually large; but the jejunum and ilium were collapsed, the lumen of which were very small. There was also marked discoloration of the intestine; no macroscopical evidence, however, of sepsis. The stomach and duodenum contained gases only.

It was apparent to my mind that the patient had never fully recovered from the effects of shock The reparative process had not, so far as I was able to determine, made any headway; in fact, had not been initiated.

Reviewing the points disclosed at the autopsy, I concluded that there were no local conditions that could have produced the constant vomiting from which the patient suffered. It must have been purely cerebral, and I would suggest that you have a careful microscopical examination of the kidneys made, as I believe that the cause of death depended on or had its origin in the kidneys.

Dr. Hugo Summa had made a microscopical examination of the kidneys, which were presented to him for a diagnosis. Both organs presented the same appearance so that a description of one will apply to the other as well. He was not aware, however, that he would be asked to make a report, and consequently did not put down his observations in writing. The impression was so deep, however, that he remembers every feature very well.

The fibrous capsule was thickened, and in, at least, 6 or 8 places it could not be detached without tearing the kidney tissue. These places corresponded to depressions in the kidney substance proper, varying in breadth from one-eighth to one-half inch. Upon removal of the fibrous capsule, the shape of the kidney was found to be normal, but apparently the whole kidney was small in all diameters. Otherwise, the surface of the kidney was smooth, of a grayish brown color, and of increased consistency throughout the whole organ.

Upon making the usual section through the whole tissue, the cortex was found to be entirely gone in some places, and at no point had it retained its normal thickness of 6 to 8 millimeters. Its average thickness was 2 millimeters. Small cysts were found here and there in the cortical substance, which may be seen in the microscopical section.

A microscopical section was made from a suitable piece. The greatly increased connective tissue is visible in the specimens, and as a special characteristic feature of interstitial nephritis, you will find the malphigian bodies lying almost directly under the capsule. This is not found in the normal kidney.

The microscopical section was stained by the new method of Van Gieson-Ernst. Haematoylin is used to give the nuclei a deep brown color. After washing the section carefully in distilled water, it is stained a second time in picric acid and acid fuchsin solution, which stains the protoplasm of the cells a deep yellow, and the connective tissue a deep red tinge.

This case brings up the question as to the propriety of placing patients under the influence of an anesthetic. particularly chloroform, who are suffering with nephritis. Speaker had seen five fatal cases of narcosis where a diseased condition of the kidneys was found post-mortem, which had not been recognized before operation. In his opinion common parenchymatous nephritis is no contra-indication to narcosis; but interstitial nephritis is a contra-indication, and that because in 99 per cent of such cases there is disease of the heart muscle, and it is this condition which causes the trouble.

Another point is suggested in this connection. Experiments made by Brown-Sequard, have led this observer to conclude that the kidney cells, besides excreting the urine, have another function, which he calls the function of internal secretion. By this function the cells are able to counteract uremia; cases having been noted where anuria had existed 26 days without the appearance of uremic symptoms. The experiments of Brown-Sequard, D'Arsonval and E. Meyer were made by removing the kidneys of animals and injecting extract of kidneys into the system, by which the symptoms of uremia were kept away. From these results they argued that the cells possess a second function, as yet not definitely known, whereby some chemical substance is secreted and retained in the system, such as we find in the physiological function of the thyroid gland, whereby the body is freed from further intoxication. It may be that chloroform disturbs this specific function of the urinary cells. At any rate, we should carefully examine the condition of a patient's kidneys before the application of chloroform.

An examination of the urine of this patient was made before operation and no albumen was detected. A chemical examination alone is not sufficient to deter-

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mine or exclude disease of the kidneys. We know that no albumen appears at all in some cases of chronic interstitial nephritis. The patient should be observed for days before the operation, a careful physical examination made, especially the specific gravity of the urine tested at frequent intervals.

Dr. A. H. Meisenbach presented a specimen of "Cholelithiasis," obtained by a post-mortem examination of a patient. The reason for presenting the specimen at this time, was, to answer some of the questions put in connection with the case under discussion.

The patient was 57 years old, married, and of unexceptional habits. Ten years ago he began having attacks of colic, supposedly due to gall stones, which occurred at intertervals of a few weeks and lasted several years. During the last five years he was in comparatively good health, with the exception of an occasional attack of indigestion, or a tendency to diarrhea upon eating certain kinds of food.

His last illness lasted about five weeks and was accompanied by continuous fever, irregular chills, marked jaundice, and pain on the right side, especially in the region of the scapula. The physical signs pointed to the liver as the seat of disease. He strenuously refused to submit to an operation, although this was advised by his physician, both in his earlier and his late illness.

The post mortem revealed that the man was well-nourished, weighed from 160 to 180 pounds, and is in apparently good physical health, except that all the tissues were dyed a deep yellow by the biliary secretion.

The median incision was made and the abdominal viscera inspected in the usual manner. The liver was slightly enlarged, but the gall bladder was found only after some searching. It was very much contracted and the fundus was almost obliterated. The presence of stones outside of the gall-bladder was determined before the liver was removed. The liver was then removed, together with the pancreas and the duodenum. The upper surface of the liver was nodular in appearance, which nodules proved to be small abscesses. Upon microscopical examination the pus was found mixed with bile.

The common duct was very much enlarged and packed with calculi, which extended to the entrance of the duct into the duodenum. The papilla was contracted and the opening plugged by a calculus. The hepatic duct was dilated, and the gall-bladder was filled with calculi. Their number has not been determined, as it has not yet been opened.

Von Helmholtz' Library.—The German Emperor has ordered his Chancellor, Prince Hohenlohe, to purchase the library of the late Prof. Hermann von Helmholtz for the Imperial Institute of Physics in Berlin. The library is supposed to be the best private collection of works of their class in the empire.

ABSTRACTS

MEDICINE.

Hypnotism Fifty Years Ago.—The *American Journal of Insanity* for January 1895, published an interesting article by Dr. James G. Kiernan, who remarks, in reference to a recent address on early American psychiatry, that the speaker hardly did full justice to some American alienists, especially to Dr John W. Galt, whose "Treatment of Insanity" is an encyclopedia of psychiatry hardly equaled as a compendium of current literature at the present time. American alienists, he says, have been fully awake to current movements of psychiatry. Dr. Galt stated that in the treatment of insanity the efficacy of mesmerism appeared doubtful, and he cited Esquirol to the effect that magnetism had been tried, especially in Germany, but facts in regard to its use in France were not exact or well observed. In 1813 and in 1816 he (Esquirol) had made a trial, with M. Faria, upon eleven insane women. Only one (remarkably hysterical) had yielded to the mangnetic influence, but her mental state had undergone no change. It produced no effects on the ten others. These trials had been made in the presence of M. Desportes, administrator of hospitals, and other persons, among them many physicians. These same trials Esquirol had repeated many times with various magnetizers, without more success. Dr. Galt also cited Guislain as follows: "As to animal magnetism, the results obtained from it are unsatisfactory; it is a means with which we ought to be on our guard. More than once it has produced disorder of mind."

Experiments were made in Richmond, Va., in 1842, of which Dr. Galt gives the following account: There was perfect silence enjoined the whole time. The patient seated himself on a chair, and the magnetizer on a higher seat in front of the patient, and at least a foot away from him. He collected himself for a few minutes, during which he held the patient's thumbs, and remaided in this position until he felt that the same degree of heat was established between the patient's thumbs and his own. Then he drew off his hands, turning them outward, and placed them on the patient's shoulders for nearly a minute. Afterward he carried them slowly, by a sort of light friction, along the arm down to the extremities of the fingers. This was repeated five or six times. Then he passed his hands over the head, kept them there a few minutes, and brought them down, passing before the face at a distance of one or two inches, to the epigastrium, where he stopped again, either bearing upon the region or without touching it with his fingers. And thus he came slowly down the body to the feet. Passes or motions were repated during the greater part of the course, and when the

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magnetizer wished to finish it, he carried his hands even beyond the extremities of the hands and feet, shaking his fingers each time. Finally, he performed some transient motions before the face and the chest at a distance of three or four inches, by presenting his hands, which were near each other, and removing them abruptly. Then, standing before the patient, he clasped her hands firmly in his own and fixed his gaze intently on her, her eyes being steadily directed to his during the whole process. About four minutes afterward be began to pass his hands alternately, or both at a time, from her forehead to her fingers, and continued this for two minutes; he then passed his right hand against her fore head, repeating the passes with his hand for nine minutes; he again placed his right hand on her forehead, making passes for about eight minutes, the time varying, of course, with the individual.

According to Caldwell, says the author, there are three schools of magnetism:

1. That of Chevalier Barbarini, who believed the effects to be owing merely to faith and volition.

2. That of Mesmer, who refered them to the passes only.

3. That of the Marquis de Puysegur, who attributed them to both.

All three schools, more or less modified, are represented to-day among students of hypnotism.

Elliotson, who alleged that he cured periodical insanity by mesmerism, produced the sleep merely by suggestion. His will was powerless in all mesmeric experiments. He never accomplished anything by it alone. He had willed excitment of distinct cerebral organs, and willed powerfully, but always in vain. He had three patients, with each of whom he had formerly taken some weeks to induce sleep, who now went to sleep when he merely raised his hand or looked at them, when they were prepared to expect sleep. He told them that if they sat still he would mesmerize them with the door closed upon them. He shut the door, walked into another room, turned back, and found them asleep. While doing this he though as little as possible of them, and busied hsmself with other things.

According to Dr. J. K. Mitchell, says Dr. Kiernan, mesmeric effect is usually producible within ten minutes, and at the first sitting, although some person have yielded only after long and repeted trials. In general, unless marked effects are produced in half an hour, subsequent trials are uesless. Sleep is dissolved by time alone, the natural duration being from thirty minutes to five hours. Artificial awakening sometimes results from merely a single wave of the hand. The nervo-sanguineous temperament is the most susceptible to the action of mesmerism. The young and the old have the least susceptility, and between twelve and twenty is the most favorable age. The influence of sex is very small. Mesmerism should be employed temporarily to relieve affections of a nervous character, when the usual means fail, and even here with due precautions. It has sometimes, especially in unpracticed hands, produced frightful disorders, both of mind and of body.

Ennemoser said that the hands were the proper organs of the will, through which volition became action. The greater the quietness of the manipulation, the less there was of bustle, gesticulation and ceremony, the more advantageous would it be to the patient, whose imagination should not be struck with the oddity of the proceeding. No uneasy curiosity should be excited; the effects should steal upon him unawares. The susceptibility to mesmeric impressions is in inverse proportion to the general organic force, and, more particularly, of the patient's nervous power.

Passavant stated that the eye and the hand not only received, but gave; the other senses only received; the sense of feeling became, in the hand, the sense of touch, from the continual activity of this sense a greater consumption of nervous power went on in the hand, particularly at the extremities of the fingers, and in consequence, probably, an increased efflux of the nervous ether; this process might be heightened in intensity by the action of the will. In the manipulations, the hand was to rest on the part affected (where the disease was local), or on those places where the most important nevous structures were situated, in particular, the head, the center of the cerebral, and the stomach, the center of the ganglionic nerveus system. Passes made with the point of the fingers, or the palm of the hand, whether with or without contact, must be carried from above downward, from the brain toward the extremities.

From these and many others instances, say Dr. Kiernan, it is evident that the American alienists of the first half of the present century were familiar with, had experimented with, and had clearly anticipated almost every position of modern investigators concering hypnotism. They recognized its dangers, its psychological basis, and the fact that an element of morbidness was needed to predispose the patient to susceptibility to hypnotism, also that the insane were subject to suggestion only in a limited degree.—N. Y. *Med. Jour.*

SURGERY.

The Subcutaneous Extirpation of Tuberculous Lymph-Glands of the Neck, Nape of Neck, and Submaxillary Region.—For the sake of thorough disinfection the posterior part of the scalp should be shaved, and disinfect the hair and remainder of the scalp carefully. The hair is covered with a gauze bandage. The incision is made at nape of neck in the hairy part, and the scar is therefore covered by growing hair. The incision began at the level of the external auditory meatus, 1 cm. from the hairy border and passes with a slight convexity downward 5 cm. back and down toward the median line. The incision passes thorough the fascia. Then we work with the

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finger and elevator, exceptionally with the knife under neath the skin, forward and down to the gland cluster, catch the first visible gland with a narrow, long forceps with 2 3 prongs, and free the gland, and then, gradually, the entire cluster with the elevator, only rarely using knife and scissors. The bleeding is slight. Endeavor to remove an entire cluster at a time; it is quicker than when the glands are removed singly. The lower and anterior edge of the wound gets very elastic during this manipulation in women and children, less so in men, and can be pulled down, especially if the head be turned slightly to the diseased side; and since the connective tissue surrounding the glands gives a great deal if the cluster is well caught, we succeed in pulling the glands out from the submaxillary and supra-clavicular region, through the incision.

The glands at a distance from the incision are steadied with the finger from the outside and brought toward the forceps. The glands, and especially those directly attached to the vena jugularis and united with the adventitia, must be drawn into the incision, or at least brought near it by means of the forceps, and separated from the vessel with care. The operation is easiest in those cases where the glands are not yet degenerated, have not induced inflammation in their surrounding, and lies loose in the connective tissue. They are simply shelled out with the finger and removed. Such cases are the exception. Primary union occurs usually in those cases where degeneration has not yet taken place. If the wound gets covered with cheesy material, primary union may take place if all tubercular matter is carefully removed, but a tubercular fistula results very easily, and has to be treated with Ag NO3. Every operator who has had to extirpate these glands knows how tedious it is to remove them when completely agglutinated with their surroundings.

After the operation, the wound is sutured. The side operated on usually becomes edematous, but the swelling passes off in 6 to 8 weeks.

D. has operated 9 times in 7 patients. In 5 the wound healed by primary intention. Of the 4 unfortunate cases, in one the non-disinfected hair fell into the wound, in a second one the chloroform mask touched the incision while the patient was turned over. In both suppuration started, and counter-openings had to be made. These misfortunes will not happen again, but one circumstance which interfers with primary union cannot be excluded from tuberculous regions, and that is infection by tubercular suppuration. This depends on slight resistance on the part of some tissue to tuberculosis, occurs also in large incisions, and can naturally be avoided by any kind of incision. It happened in two cases, in which the glands were softened already, and counter-openings had to be made.

But although we do not always succeed perfectly, it is still worth while, in cases where there is no scar and the glands are still movable, to operate by this subcutaneous method, even in case a counter-opening has to be made.—Prof. Julius Dollinger of Budapest, *Centralblatt fur Chirurgie; American Medico Surgical Bulletin.*.

NOTES AND ITEMS

Contagious and Infectious Diseases.—General Rules for their Restriction and Control.—Definition.—A contagious or infectious disease is one that is communicable directly from the sick to the healthy, or otherwise, from some contaminated source, by means of a virulent agent, known under the general term of contagium. It has been demonstrated that the contagium, *i. e.*, the special cause of disease, is a living organism.

Of the various communicable maladies, diphtheria, scarlet fever, small-pox and measles may be classed as eminently contagious. Others, as Asiatic cholera, typhoid fever, typhus, yellow fever, are infectious, and their communicability is not direct from the sick, although it is as positive from the germs.

Tuberculosis (consumption) is also communicable, and as far as possible should be dealt with accordingly.

Modes of Transmission.—For practical purposes, the modes by which contagious and infectious maladies spread are as follows: For diphtheria, scarlet fever, small pox, measles, the contagium is transmitted by contact with the emanations, exhalations, discharges, etc., from the patients wherever and whatever these principles may be. Clothing, bedding, carpets, furniture, dishes, and various parts of the room may harbor or carry the foe. The contagium may also spread through the medium of air, dust, water, milk, food, etc The careless physician, nurse, attendant, visitor and the convalescent may also carry and spread the dangerous elements. Contagium (or germ) of cholera, typhoid fever, typhus, and like infections exists chiefly in the discharges of the patients, and may contaminate water, milk and others food supplies; in certain conditions it may even be transferred on clothing and cloths; it may be transmitted from animal to man by means of infected milk or meat. As to consumption, its chief medium of dissemination is the spittle of consumptives. In people suffering from pulmonary tuberculosis the expectoration is at times full of germs. If this discharge is allowed to fall on the floor, carpets, etc., of the houses, churches, schools, theatres, etc., or on the sidewalks, where it will dry, the germs are afterwards caused to rise in the air with the dust, either by the use of the broom or otherwise, and all the people exposed must inhale the contaminated air. Under such influence the susceptible becomes infected.

How to Avoid the Contagium or Special Cause of the Disease.—Do not take the breath of one sick. Unless you are needed to care for the sick, or are protected by having had the disease, or in case of small-pox

by thorough vaccination, do not go near the sick person. Do not wear any clothing the sick person has worn, during, just before, or just after his sickness, until after scalding and disinfection. Keep your hands free from discharges from the body or skin of the sick person. Do not touch him with sore or scratched hands. Particularly avoid inhaling or in any way receiving into the mouth or nose the branny scales that fall off or peel off from one recovering from, or apparently wholly recovered from scarlet fever.

Practice special personal cleanliness, consisting of frequent wash bathe, irrigation of the mouth and garg ling of the throat twice a day; cleaning of the head, finger nails, etc. A palatable, effective, non-poisonous antiseptic mouth-wash and gargle for daiy use may be made with citric acid, oil of cinnamon and eucalyptus, each of which are good disinfectants, particularly for the germs of diphtheria, typhoid fever, consumption and cholera. By thus keeping the mouth disinfected, the danger of infection of the throat by diphtheria or consumption germs, or of the alimentary canal by germs of typhoid fever, cholera, etc., are much limited.

How to Restrict the Contagium or Special Cause of the Disease.—Isolate the patient preferably in a room on the upper floor, from which, if possible, carpets, curtains, stuffed furniture, and all the other articles not required for immediate use, should have been removed beforehand. This should be done even in mild cases of the disease classed in the foregoing as eminently contagious. The wants of a patient suffering from such a malady should be attended to by adults, preferably those protected by proper vaccination or by having had the disease. Children and those not thus protected and not essentially needed as nurse or attend ant to care for, feed and comfort the patient should be kept away. Consumptives or those exposed to diphtheria should gargle their mouth two or three times a day with such an antiseptic mouth-wash as mentioned above, and spit in spit-cups containing a copperas solu tion, as explained farther in this circular.

No one should go from the sick room where an eminently contagious disease exists to a child or other unprotected person until after a change of clothing, a thorough washing of the hands, face, hair and beard. Always wash the hands thoroughly after the necessary handling of the sick person or of anything that has been in contact with the sick. Keep those who have been exposed to any of these diseases away from schools, churches or other assemblies, and from all children until it is known whether they are infected; and if they are found to be infected, isolate them until after complete recovery and thorough disinfection.

Cleansing and Disinfection in the Sick-Room.—Open the windows as much and as often as possible to produce thorough ventilation, taking care to protect the sick and all who atted them. It is very useful to keep a fire night and day in an open fire place. Keep in the room a tub containing a quarter of a pound of sulphate of zinc and two onces of common salt to each gallon of water. All bed linen, towels, clothing, etc., used about the patient should be placad to soak in this solution for at least an hour before removing from the room, and should then be thoroughly boiled separate from the family washing Never send such articles to the public laundry. All dishes, knives, forks, spoons and instruments that such a solution will not injure should likewise be immersed before removal; the others should be scalded in the sick room. Afterwards all such articles should be taken out and washed in scalding water. The spit-cups and chamber-vessels used by the patient should be drenched before they are removed with the same disinfecting fluid, but three times as strong, or in a solution of copperas made by dissolving one-and a half pounds of cepperas in a gallon of water. The safest way is to always keep some of this solution in the spit-cups and vessels.

How to Destroy the Contagiun or Special Cause of the Disease.—(*a*) Thoroughly disinfect or destroy whatever is removed from the the person sick, or from the sick room. In cities, throw all discharges from the patient received or mixed into vessels with a strong solution of copperas, as stated, into the watercloset; elsewhere they should be buried at least 100 feet distant from any well; or where this is impracticable, they should be received on old chothe, which should immediately be burned or disinfected and buried.

(*b*) Thoroughly disinfect the sick-room and its contents after removal of the sick person, whether by death or recovery.

Disinfect as follows: Burn whatever has been in contact with the sick person and is not too valuable to burn. Garments, sheets, blankets, etc., that will not be injured by bleaching should be boiled for half an hour in a zinc solution, as mentioned in the foregoing, made by dissolving zinc sulphate and common salt in water, in the proportion of four onces of zinc sulphate and two ounces of common salt to one gallon of water; or at least they should be boiled in water one hour after immersion in this solution as stated. Hang up and loosely spread out clothing, beding, etc., that cannot be boiled; or spread it loosely over chairs in the sick-room, leaving the bedstead and other furniture in the room. Close all openings to the room very tight. For a room ten feet square place in the center two pounds of sulphur in an iron pot or pan supported on bricks. Set the sulphur on fire with live coals, or with a spoonful of alcohol lighted by a match. Be careful not to breathe the sulphurous fumes. Leave the room tightly closed for twelve hours, then air it thoroughly. For a large room use a proportionately larger quantity of sulphur, at the rate of two pounds for each 1,000 cubic feet of air-space; and try to burn as much as possible of the sulphur used, and in more than one place, so that every spot and corner is reached by the fumes. It is preferable to repeat this fumigation.

Keep your house and premises and everything connected therewith clean, but remember that the contagium of diseases may attach to the cleanest article of

clothing, food, drink, books or papers if it is exposed thereto.

When the death of a person who has died from scarlet fever, diphtheria, or small-pox, cholera, or yellow fever, is announced in print, the notice should state the cause, as: "from scarlet fever," "diphtheria," or "small-pox," "cholera," or "yellow fever," as the case may be, to prevent attendance at the funeral or visits to the house by persons liable to take the disease.—*Missouri Sanitarian.*

Argon—The New Element.—At a recent meeting of the Royal Institution in London, it is claimed that the existence of the new element, discovered by Lord Rayleigh and Professor Ramsey and to which they have given the name argon, was fully demonstrated (*Jour. Am. Med. Ass'n.*). It is said that the discoverers have finally succeeded in separating it from the atmosphere on a large scale and have sent a portion to Professor Crookes and a portion to Dr. Olszewski of the University of Cracow, to liquefy and solidify, and that these physicists have found that the new substance gives a spectrum of its own and has its own boiling point, freezing point, critical temperature and critical pressure, all different from those of any other element. The cable dispatch says: "Argon gives two spectra, the red and blue, and it is this which raises a doubt whether the investigators are dealing with one or two substances. If the later should prove true then there is a new vista opened up, and it is suggested perhaps one of these substances will prove to be Professor Crookes' ideal protyle, the ultimate basis of matter of which all others are only combinations."

Liability for Personal Injuries is not Changed by Presence of Microbes.—A novel application of an old rule of law has been made by the United States Circuit Court of Appeals in the case of the Crane Elevator Co. v. Lippert, dicided Oct. 1, 1894. (*Jour. Am. Med Ass'n*). This was an action brought to recover damages for personal injuries. The party who instituted it testified that he fell, and struck his shoulder upon some iron. He got up and walked home He felt some pain in his arm, below the shoulder. It was swollen the next day, but he returned to work, and after working about an hour he went home and went to bed. About four days after, a doctor was called. His arm was then badly swollen. After treatment by two or three different physicians, he went to the hospital, where he was in bed about a month and was operated on by a surgeon, by whom a piece of disease bone was taken out of his arm. The medical testimony tended to show that, when admitted to the hospital, he was suffering from tubercular osteomyelitis, resulting from the presence of microbes or tuberculous germs in his system, that if these microbes or germs had not been present in his system, the fall and consequent bruise would not have resulted in the serious injury from which he suffered. The point was, therefore, made by the lawyers that the injury sustained was not the proximate result of the fall, but arose from the presence of tuberculous germs in his system. The court, however, holds otherwise. It says that the wrongful act of the party sued subjected the injured party to other and dependent causes, which were set in motion by the original hurt. It was the hurt occasioned by the fall which afforded an opportunity for the active development of the poisonous germs which had theretofore been innocuous. For this at was answerable. It was the wrongful act which gave rise to the subsequent injury, and it was not apparent that the injury would have occurred in the absence of such cause. The principle applicable is that when there is no intermediate efficient cause, the original wrong must be considered as reaching to the effect, and proximate to it.

A Race of Heavily-Furred Cats.—An example of the adaptation of animals to circumstances is given in the *Lyon medical* for December 9. In America, says the writer, there are large underground warehouses for the preservation of meats, poultry, and fish, where the temperature is maintained at about three degrees below the freezing point. In was thought that this intense cold would cause the disappearance of rats and parasites, and in fact, in the beginning, they died. Gradually, however, they became accustomed to the intense cold, and were soon covered with a very thick fur extending from the nose to the tip of the tail.

An experiment was then made with cats, but they all succumbed to the cold, until a cat with unusually thick fur was brought in. This cat lived, her fur beaome still longer and heavier; and one day she gave birth to seven kittens, which were the object of a great care. At the present time these cats are entirely acclimated and have numerous descendants.

This fact, says the writer, calls to mind the savage cats in Canada, which have short tails, enormous eyebrows and whiskers, and very thick fur. These cats, when brought out on a hot day, die, sometimes in a few hours, under the influence of the light and heat.—*N. Y. Medical Journal.*

The Next International Congress is to be held in Moscow in 1896; the President will be Dr. J.Th. Klein, Dean of the Faculty of Medicine. The Local Committee on Organization has chosen as its Prieident Count P. A. Kapnist.

Free Medical Education in Denver.—It is certainly very unfortunate, and surely very much to be regreted, not only in the interest of the medical colleges, but in that of the medical profession as well, that there should be a medical college in Denver granting free tuition to all students residing in the State of Colorado, and practically to all students from without the State. This condition of affairs necessarily lowers and belittles the standard and standing of our medical colleges, in-

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asmuch as the others schools, in order to compete with the free institution, must of necessity cut fees.—*Denver Medical News.*

A Decrease in the Mortality of Diptheria and Croup Cases.—Since the introduction of the use of antitoxin in diphtheria and croup cases, a marked decrease in the mortality of children suffering from the two diseases has been noticed by the New York Board of Health. From December 15, 1894, to January 12, 1895, the total number of cases reported was 933, with the number of deaths as 273, or twenty nine per cent. From January 12, to January 26, 640 cases were reported, of which 119 proved fatal. The death-rate was reduced to twenty-one per cent.

The Guinea-Pig Supply.—For the the manufacture of antitoxin guinea-pigs are needed. Fanciers, who dealt in pigs, have supplied the market, but the supply is not equal to the demand. Fame and fortune, the health authorities say, await the boy who will raise guinea pigs for use in the laboratory. Seventy-five cents is paid for a healthy pig two months old. A pair for breeding purposes cost $1.50. The female litters four times a year, with four in a litter, but one of the number dies shortly after birth. It is almost impossible to get a guinea-pig for use in the laboratory at present. In a few months, however, the market will be over stocked,and we advise the small boy to proceed with caution.—*Med. Record.*

DOWS, IOWA, November 20, 1894.

S. L. REEFY, M.D., Edinburg, Ill.—

DEAR DOCTOR—Your Automatic Driving Lamps were received in good condition. They are the best thing of the kind I ever saw. I attached them to my buggy and drove rapidly over a rough road with a wind blowing that would take the whiskers off a cayote, but was soon relieved of that disagreeable apprehension that they would be extinguished at the next sudden jolt, or that if the wind struck them at a different angle I should be left helplessly in the dark. With them one is independent of sun or moon, so far as driving is concerned and the risk of breaking a buggy or one's neck is reduced to a minimum. With them one avoids collisions with other nocturnal travelers with heavier vehicles as both parties can see where to pass on a narrow grade or a dark road. The lamps are a "success."

Inclosed you will find bank draft for $10 to balance account. Very truly yours, J. A. MULNIX.

CHEMICAL RESEARCH proves that Kola contains a large percentage of Caffeine (the active principle of tea and coffee), also Theobromine, the stimulating principle of Cacao. But not to these alone is its remarkable virtue to be credited, as further investigation proves that the fresh (undried) Kola nut contains a peculiar active principle (glucoside) found in no other drug, to which the name of Kolavin has been given. It is now definitely determined that to this peculiar principle, which is found abundantly in the fresh nut, is mainly due to the marvelous action on the human organism, as in the drying of such Kola nuts as are generally imported to this country this most valuable principle is partially, if not wholly, decomposed into caffeine.

F. Stearns & Co , of Detroit, Mich., were the first manufacturing pharmacists to take advantage of the knowledge of this fact, and they have prepared a delicious Wine of Kola, to which they have given the fanciful title of "Kolavin" to distinguish their product from similar preparations which may in time appear. Kolavin is made from the fresh (undried) Kola nute, each tablespoonful dose representing thirty grains of the fresh nuts. It is palatable and delicious, and highly recommended in the treatment of nervous exhaustion, atonic dyspepsia, melancholia, various diseases of the heart, asthma, sick headache, sea-sickness, chronic alcoholism, etc.

Physicians who desire to test this new product can obtain samples of "Kolavin" and literature on Kola by making application to F. Stearns & Co. See coupon.

MEDICAL PRACTICES bought and sold. Medical assistants and Substitutes provided. List of 200 Practices for sale, and all further information will be sent free by addressing "THE MEDICAL ECHO" Lynn, Mass.

SANDOVAL, ILL., May 2, 1887.

The most complete saddle-bags and hand satchel I have seen. CHARLES H. BLACKBURNE, M.D.

NUMEROUS SLIGHT AILMENTS are directly traceable to a weakened condition of the digestive organs and an improper assimilation, the result is imperfect nutrition, whether due to an excessive ingestion of non-assimilable food or a diminished and vitiated condition of the natural digestive secretions. Especially do we see this enfeebled digestion in certain forms of fever, whether of the sthenic or asthenic type, in neuroses, anemia, general debility, and the diarrhea of infants. In all these cases Zuma-Anana (Pine-Apple Digestive Wine) meets the full requirements. It at once carries on the process of digestion, giving tone and vigor to the weakened peptic glands and restoring their natural activity, whereby the proper food elements can be taken up by the absorbents and incorporated into the living tissues.

FOR PAIN IN THE EYES.—Heretofore there have been but few remedies from which we could choose in prescribing for the relief of pain in the eyes. Now, however, Dr. D. H. Howell, Editor of the *Southern Medical Record*, has given us a new remedy which promises to be of the greatest value in these cases. Dr. Howell says he has been a great sufferer for two or three months with the most intense pain in the eyes. "At last I thought I would try Antikamnia. I was relieved in less than two hours. I now carry it in my pocket all the time."

PHILADELPHIA, PA., December 8, 1894.

MCARTHUR HYPOPHOSPHITE CO., Boston, Mass.—

GENTLEMEN—It gives me pleasure to testify to the usefulness of your Syrup of Hypophosphites.

Since my attention was called to it, I have used the Syrup in laryngeal and pulmonary tuberculosis and the strumous diathesis so common to children.

The result has far exceeded my expectation.

J. A. IRWIN, M.D.,
Late Assistant Children's Department and Assistant Gynecological Department of Jefferson College Hospital.

CINCINNATI, OHIO, August 8, 1891.

WAYNE'S ELIXIR CO.—

GENTLEMEN—I have been familiar with Wayne's Elixir for many years, and I take pleasure in recommending it to the profession, feeling confident that in any case in which a diuretic is indicated that it will give satisfaction.

W. E. KIELY, M.D.,
Professor of Principles and Practice of Medicine, Woman's Medical College, Cincinnati, Ohio.

Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

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ORIGINAL ARTICLES

Tuberculosis of Bones and Joints—The Future Field of Litigation Against Railroads.

BY EMORY LANPHEAR, M.D., PH D., ST. LOUIS. MO.,

Professor of Surgery and Clinical Surgery in the St. Louis College of Physicians and Surgeons.

Read before the Mississippi Valley Medical Society at Hot Springs, Ark., November 20, 1894.

Many as have been the suits brought against railroad corporations upon the ground of injury, remote or immediate, to the spinal cord, they are few as compared with those liable to be instituted as soon as the common people and "contingent fee" lawyers appreciate the fact that minor injuries—slight sprains and twists—lead to the development of bone and joint tuberculosis. The reasons why suits will constitute a great field of litigation are three in number:

1. Anyone who will investigate the subject will agree with the statement of Dr. W. B. Outten, chief surgeon of the Missouri Pacific R. R., made in an article on, "The Best Plan for the Formation of Relief Associations upon Railroads;" viz: "There is a greater tendency upon the part of the railroad employee to sue than there is in any other vocation; thus out of 14,372 injuries to employees, all of which occurred upon one of railroad, 90 suits were entered, or about one in every 150 persons injured." And passengers injured during transit are still more prone to enter suit under the law governing common carriers, relying upon the average jury to give a verdict against the railway. Every conscientious physician, whether or not a "railroad surgeon," should encourage equitable settlement out of court whenever possible.

2. Injured parties are very apt to fall into the hands of unscrupulous attorneys, unfortunately too numerous both at home and abroad; who counsel immediate suit, reject proper overtures for settlement and appropriate the proceeds as "contingent fee and expenses" when damages are awarded. James Reid, writer to the *Signet* (quoted by Dr. Outten in his paper just mentioned) states there is a certain class of lawyers in Great Britain who make a specialty of taking claims of this kind; they even go, uninvited, to the man injured or to the representatives of one killed and offer their services backed by promises to secure large compensation. These "professional gentlemen" of course refuse to listen to any settlement, or will not accept anything short of an absolutely prohibitive account, until they have run up a large account against their clients. The company in many cases, knowing the claim to be a just one, is all along willing to give compensation. But it is only when a large account has been rolled up that the attorneys announce their readiness to settle and then take care to deduct the costs and fees from the amount accepted. This class of business has become quite an industry of itself, both in the United Kingdom and the United States. It is the duty of every surgeon to emphatically condemn these "cormorants—harpies that devour everything" as Swift describes them; they are the men who bring malpractice suits for pauper patients against skillful surgeons who have unfortunately had bad results in some exceedingly difficult cases in obstinate patients, and who receive half or two-thirds of the proceeds for their pains. I do not mean to include conscientious attorneys who take cases (even upon a "contingent fee," which is often necessary) in which there has been undoubted serious damage and when the plaintiff has refused settlement though ignorance or bad advice; but to the conscienceless man who manufactures a case simply to "bleed" the company and his client. Unfortunately—like irregular physicians—quack lawyers are altogether too numerous.

3. Slight traumatisms, a trifling sprain or severe wrench, to a joint may create a *locus minoris resistentiæ* the result of which by infection of the tubercle bacillus is ultimately a more or less complete destruction of the joint structures. In many instances the resultant osteal or synovial tuberculosis is directly traceable to the injury as an exciting cause. And suit may be instituted by passengers under the law governing common carriers, and by employees under the "Employer's Liability Act."

It is to the possibilities of this third reason that I wish to draw attention.

Under the present interpretation of the law and of supreme court decisions the probabilities of winning are not as good as they will be in the near future when revision will be made in conformity with the advances

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now being made in the study of the pathology and prognosis of tuberculous processes in bones and joints. Our ideas relative to tuberculosis have undergone a radical change in the past few years. All progressive surgeons, for example have totally discarded the term "scrofula" since Modigliano, of Pisa, demonstrated beyond question that "scrofula" is but an attenuated tuberculosis. And based upon that conclusion we now group as tubercular all the following conditions:

1. Pott's disease of the spine.
2. Morbus coxæ—coxitis—hip-joint disease.
3. Tumor albus—white swelling of elbow and knee.
4. Hydrops articuli—chronic dropsy of the joint.
5. Fungous arthritis—chronic hyperplastic or pan ous synovitis.
6. Chronic synovitis.
7. Chronic purulent accumulations in joints—empyema articulationis tuberculosum.
8. Necrosis of bone following slight injury.
9. Certain forms of osteomyelitis.

Furthermore we have learned that these slight injuries do not result disastrously in healthy individuals, it is absolutely necessary that there be depots of tubercle in the lung or lymph-glands; or that the bacillus tuberculosis be circulating temporarily in the blood, reaching the injured bone or joint either as an infected embolus or by mural implantation from the blood; or rarely by direct inoculation through an external wound. A question concerning this point, of much medico-legal importance is: Would the presence of the bacillus tuberculosis in the blood, from a focus in the lung or lymph-gland, lead to the development of osteal or synovial tuberculosis without the local injury to set up a *locus minoris resistentiæ?* Unquestionably the answer is no! Then what is the deduction? If the development of the tuberculous disease can be traced directly back to the railway injury—in other words if the plaintiff can establish that the resultant disease was in the direct line of causation and sequence—a suit will hold. But it throws the burden of proof upon the plaintiff, as it must be proven that in the interval between the reception of the injury and the development of the local tuberculosis the patient could not have received a slight injury which might act as the exciting cause; manifestly an impossibility in many cases. However, the evidence is sometimes direct; in which instances the companies are anxious to settle. Two cases may be cited.

CASE I.—Phil S, a young man in the employ of the C. M. & S. P. R. R., received an injury to a previously healthy medio-tarsal joint while at his work. That evening he consulted the surgeon who, recognizing the tubercular tendency of the patient, immediately placed the foot in plaster-of-Paris and put the man on crutches. At the end of several weeks the cast was removed; as the soreness continued the man was placed in bed for some weeks, at the end of which time he was allowed to go about on crutches, but never touched the ground with the affected foot. After a considerable time I opened up the joint and found tuberculous disease of the ankle. The case did not do well after the curettage and I was compelled to amputate the leg above the ankle. Here—although there was a question as to the legal responsibility of the Company—the hospital expenses, the man's time, an artificial leg, etc., were all paid for by the Company, this method of settlement being preferred to one in court. The Company's surgeon agreed that the local tuberculosis was directly traceable to the injury as the immediate cause.

CASE II—C. C. C., aged 55, suffered from "tumor albus" when young, but was cured by rest and other treatment. The affected knee never recovered its entire usefulness but did not give any trouble until twisted in an accident on one of the great trunk lines running into Chicago. Immediately after the injury Mr. C. was taken to Mercy Hospital and placed under the care of Dr. Edmund Andrews; subsequently he became my patient at St. Joseph's Hospital. For months he remained in bed because the injury—as is so often the case in tuberculous joints that have undergone spontaneous cure—had caused a recurrence of the disease; there was no question of cause and sequence, nor as to permanent disability—and recognizing this the Company settled with him for $25,000, he having sued for $50,000

If such cases as these are numerous what protection is there against them and against fraudulent claims?

Happily for the railroad companies there is a decision of the Supreme Court of the United States which in great measure protects—for the present time; though there can be little doubt that in the near future there will be a reversal or marked modification of the ruling.

This is, in substance, as follows: If an injury can be attributed to a cause which in the natural sequence of events stands in the relation of cause and effect to the injury *that* is the proximate cause; and if it be charged that there is a predisposing cause as well as the blows or traumatism it must be shown, in order to recover, that the secondary or intervening cause must be a force or power acting subsequently to the time of the primary cause; *and must be a new and independent force or power of* ITSELF *sufficient to stand as the cause of the misfortune;* and such a cause as interrupts the natural sequence of events, turns aside their force, prevents the natural and probable results of the primary or original cause and produces a result that could not have been reasonably anticipated.

As no surgeon who thoroughly understands the subject of tuberculosis can fail to testify that a mere injury to a joint cannot *alone* originate a tuberculous disease of the bones and joints, a literal construction of the italicized sentence is sufficient to protect the company if the expert correctly states the scientific relation of the injury to the development of the morbid manifestation. Furthermore—if this sentence be changed,—there still remains an element of protection in the expression; "produces a result that could not have been reasonably anticipated."

Upon this point of law a case was recently decided in a Kansas court. This case was tried at Ft. Scott, Sept.

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14, 1894. (Blanche Watson vs. Missouri Pacific Railway and the Missouri, Kansas & Texas Railway—District Court of Bourbon County). The plaintiff at the time of the alleged injury was a child in arms, seven months old, previously in perfect health so far as the testimony showed. She sued for ten thousand dollars on account of Pott's disease of the spine, which developed some months after the injury. At the accident the coach in which the child and mother were riding was thrown on its side; the mother was uninjured and there was no perceptible injury to the child except a slight bruise upon the face. It was claimed by the plaintiff that a half hour after the accident the child cried as if in pain, with vomiting, etc; in three or four days two "black and blue spots" were found along the spine; from that time on it was fretful and in general bad health, crying with pain wherever lifted by the arms. No treatment was sought for several months, but when the parents discovered that the child was becoming "hunch-backed" a physician was consulted who found the child suffering from tuberculosis of the dorsal vertebræ—"Pott's disease." There was no history of tuberculosis in the immediate family though there was in some remote members. The plaintiff claimed that the injury was the exciting cause and practically the essential cause since without the local trauma spinal tuberculosis never would have developed; that the existence of tuberculosis in remote members of the family should cut no figure; and that, in the absence of a history of subsequent injury to the vertebræ, the railway accident should in the natural sequence of events be regarded as the proximate cause—in accordance with the first part of the ruling of the Supreme Court. The defendant pleaded that no relation should be shown to exist between the alleged injury and the developed Pott's disease since the plaintiff must prove beyond question that there was no intervening accident such as a fall or severe wrench—an impossibility because the child had not been under constant surveilance; also that the bacillus tuberculosis was the primary and proximate cause while the injury was not an efficient and independent cause from which Pott's disease might have been reasonably anticipated as an effect.

As would naturally be expected the medical testimony varied. The ignorant and ancient witnesses contended that the injury itself was *alone* sufficient to cause the dorsal caries—Pott's disease. This position is obviously untrue as we know positively that the bacillus tuberculosis must be present somewhere in the system in order that this form of spinal deformity may develop.

Other witnesses claimed that the bacilli of tuberculosis (as well as the peculiar micro-organisms of pneumonia, cancer, etc.), are constantly floating in the air and are being taken in through the lungs, stomach, intestines, inoculation of wounds, etc., as well as being found in depots like lymphatic glands—the result of heredity; but that they lie dormant for years and years—perhaps never causing any disease—unless there be some injury in some part of the body. In other words there must be a *locus minoris resistentiæ* set up by either trauma or inflammation (especially a slight injury), and so the injury should be classed as the real cause of the disease. The testimony—in the main correct—is lame in the assertion that heredity plays an important part, for *tuberculosis is not an inherited disease—it is always acquired; i. e.*, it is an infective disease; and also the evidence is wrong in laying too much stress upon the importance of the railway injury, as the accident never could have resulted in the spinal disease if the tubercle bacillus had not been present in the body—the bacillus being the essential cause of the affection while the traumatism was but contributory to its development. A fall from a chair might have produced the same result; and if the child were in perfect health at the time of injury no such result could have been reasonably anticipated in the natural sequence of events.

The evidence of experts in behalf of the defendants was equally objectionable. It was: that there was no relation between the injury and the local tuberculosis; that the bacilli get into the circulation through the lungs, the intestinal canal or by inoculation, but are constantly eliminated without damage to the individual *unless there be an inherited diathesis*—all of which is true save the first clause and that which relates to diathesis, which may have an element of truth in it—but is not essential. However, the statements most disapproved were that in a child less than one year old there could be no relation between the blow to the back and the development of the tubercular trouble because at that age the spinous processes are wholly disconnected from the bodies (that is, the bones are still mostly cartilaginous) so that a shock to the posterior portion of the vertebræ could not be transmitted to the bodies where the lesion first is manifested. The error in this reasoning—which was very effective with the jury when illustrated upon a skeleton—lies in the fact that a direct blow is not an essential factor in the production of local tuberculosis; a slight wrench or sprain is all that is necessary for establishing a *locus minoris resistentiæ*. And the second objectionable statement was that traumatism bears no relation whatever to the tuberculous disease; a declaration for which, I believe, no evidence can be brought in support. Certainly all authorities agree in placing slight injuries as second only in importance to the presence of the tubercle bacillus as causative agents.

In conclusion I beg to submit the following as

What the Impartial Expert Should Testify.

1. Pott's disease, hip-joint disease, white swelling, fungous arthritis, most cases of chronic synovitis, many cases of necrosis and osteomyelitis, empyema of joints and all dropsies of joints—are of tubercular origin.

2. "Scrofula" does not exist, all diseases formerly so classed being but attenuated forms of tuberculosis.

3. Family history is not important as tuberculosis is always acquired and never inherited. If tuberculosis be in the family infection is much more liable to occur.

4. Infection may occur very early in life (by moth-

er's milk or sputa-laden dust), the germs lie dormant for many years, the tuberculosis developing only after an accident.

5. Injury to bone or joint must be slight—to cause local tuberculosis, as a gross trauma (sufficient to produce acute inflammation, fracture, etc), cannot be followed by tuberculosis.

6. Injury *alone* can never produce tuberculosis—the tubercle bacillus must always be present in the body or introduced into a wound at the time of injury.

7. *Per contra* tuberculosis of bones and joints will not develop without local injury.

8. If after the railroad accident falls, wrenches or other slight injuries may have possibly occurred the local tuberculosis may be ascribed to them as well as to the railway accident.

Clinical Lecture.—Three Operations for Extraction of Cataract—One Artificial Ripening of Senile Cataract.

BY JAMES MOORES BALL, M D,

Professor of Ophthalmology and Otology in the St. Louis College of Physicians and Surgeons; President of the Tri-State Medical Society of Iowa, Illinois and Missouri.

Delivered before a section of the senior class of the St. Louis College of Physicians and Surgeons, January 31, 1895.

GENTLEMEN:—To day, owing to the abundance of clinical material at my disposal, I shall show you several cases of cataract on which the operation of extraction will be performed. I always extract without the iridectomy unless a specific reason exists for the making of an iridectomy. This is a more difficult operation but, if all goes well, the patient is left with a nice round pupil, in place of the large coloboma of an iridectomy.

CASE I.—The first patient, a colored woman who does not know her age, presents bilateral cataract. Each eye is ready for operation so far as the ripeness of the lenses is concerned. We will operate upon the left eye. The patient's face has been thoroughly cleansed, the conjunctival cul-de-sac washed with a 1:2000 solution of bichloride, and cocaine has been instilled. We insert the Knapp speculum; you will notice the palpebral opening is unusually small, causing the woman to look like a Mongolian. The distance from the inner canthus to the root of the nose is greater than usual, and the eye is small. This state of affairs will made the operation more difficult than usual. Not being ambidextrous it will be necessary for me to stand in front of her in operating upon the left eye (the writer has recently learned to extract cataracts with his left hand). A few instruments are now handed to my assistant and we begin. The eyeball is turned downward by forceps held in my left hand and a small Graefe cataract knife is passed through the apparent corneo-scleral junction and brought out at a point opposite. Now by a gentle sawing motion the cut is made, the knife is laid aside, a cystitome of the angular variety is passed into the eye, turned on its axis, and made to incise the anterior capsule of the lens. Now, stepping behind the patient, I take the cataract spoon in one hand and a spatula in the other and deliver the lens. You will notice that considerable pressure is required—more than in the operation with an iridectomy, since the resistance of the iris must be overcome. The iris, by its own elasticity, withdraws into the eye, but the pupil is not in the center of the cornea. After cleansing the eye of all fragments of cortex we will gently stroke the iris back into place, leaving it with a central pupil. The speculum is now removed, the lid is closed gently and a moist dressing of bichloride applied. The other eye will be bandaged.

CASE II.—This man, Mr. H., aged 60, a German, was operated on some time ago by some one who removed a cataract from his right eye; the result was not satisfactory and he wants me to remove the opaque lens on the left side. He can not count figures but readily tells the location of the windows. Having him well prepared for the operation I will now remove the cataract. This is a much easier case upon which to operate. The eye is of good size, the palpebral fissure of normal width, and everything promises a good result. You notice that I pick up another knife, it being my practice never to use a cataract knife the second time without sharpening it. The knife and other instruments are dipped into boiling water for a moment. I pass the knife in the usual manner and the section is made without a hitch, and those who are near to the patient will notice how the cornea collapses after the cut is made. The capsule is now ruptured in the usual manner and the delivery effected without difficulty. The dressing of this eye will be similar to that of Case I.

CASE III.—This old negro, like many of his class, does not know his age, but he appears to be about 70. He has been blind in both eyes for three years. Each lens looks white like milk, and it is in such eyes that we find Morgagnian cataracts—one with a hard nucleus surrounded by liquid. You will observe here a marked arcus senilis. This, however, has no bearing upon the healing of the wound. The usual incision is made, only smaller than in the preceding cases; the capsule is ruptured and now you see the milky substance running out of the capsule. It is a case of Morgagnian cataract. The hard part of the lens is delived through the natural pupil. In this case the iris remains in contact with the lips of the wound. The pupil has been cleared of all debris, and the iris has been stroked back into place but immediately prolapses. Perhaps the use of an eserine solution would keep it in place, but I will not take any chances. The iris is cut off, the angles of the iris are freed from the corneal wound, and the usual dressing applied.

CASE IV.—This man has noticed failing vision for two years. Inspection shows bilateral immature cataract. He readily counts fingers at six feet. It is in such

cases, where both lenses are becoming opaque slowly, that an operation for artificial ripening is indicated. There are many methods of proceedure, all of which have been advanced since 1881, when Foerster, of Breslau, began his operations. He was in the habit of making an iridectomy, after which massage of the lens was made by a strabismus hook, the collapsed cornea intervening between the lens and hook. It was an indirect method. The operation which I prefer, and which bears Bettman's name, is a direct trituration. The pupil is widely dilated by atropine, the usual antiseptic and cocaine solutions applied, and we commence. I introduce a keratome into the anterior chamber, not for the purpose of performing an iridectomy, but simply to make an opening Through this opening a spatula is passed, and by a concentric motion the anterior capsule of the lens is triturated. Care must be taken lest we rupture the suspensory ligament and get inflammatory symptoms. We desire to break up some of the fibres of the capsule so that some of the aqueous humor may come in contact with the lens. The lens will absorb aqueous, swell up and ripen in a few weeks. Hence, such cataracts which otherwise might require years for maturity, will often be ripened and removed within five or six weeks. The spatula in withdrawn, a few more drops of atropine instilled and the eye is bandaged. The nurse is instructed to apply atropine twice a day and the bichloride dressing is used. As you see, I have made no attempt to hurry. Where everything is properly planned and systematically executed, an oculist can remove a half dozen cataracts within the limit of an ordinary clinic hour.

810 Olive Street.

Immunity and Immunizing.—Buchner and his fellow-workers injected sterile emulsions of wheat gluten into the pleural cavities of dogs and rabbits, and obtained an exudate free of bacteria, but rich in leucocytes. This was more powerfully bactericidal than the blood or serum of the animals under observation. Inasmuch, however, as phagocytosis was a commonly observed phenomenon in the exudate, it became a question whether the destruction of the bacteria was due to it or to substances contained in the liquid. This question, of course, could not be answered simply by the microscope. It occurred to Buchner that freezing would destroy the vitality of the leucocytes, probably without injuring the bactericidal properties of the serum, and the consequently thawed serum would show whether the destruction of the bacteria was due to the serum or to the cells. The experiment was performed, and the bactericidal alexine uninjured, while the leucocytes were killed. The serum after thawing was found to be just as powerfully, if not more powerfully, germicidal that the unaltered exudate.—*Centralb. f. Bakt. und Parasitenk.; Univ. Med. Mag.*

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EDITORIALS

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st.

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That Humorous (?) Programme.

Before the meeting of the St. Louis Medical Society on February 23, the members present were surprised to find on their desks a would-be humorous programme, evidently written to ridicule the present state of the Socity's affairs and notably the pending investigation of one of its members. A widely divergent speculation has been indulged in by a number of reporters and medical men. The papers on the few days following published an extensive list of the possible perpetrators of this document. This must be quite complimentary and a source of great satisfaction to the author or author's of the programme.

A number of the more prominent members of the Society were lampooned with questionable taste and doubtful efficacy. To us it always has appeared the very contrary of wit and humor, to call in zoological comparisons in a controversy. The earmark of one of the perpetrators is indicated by the fact that one of the lampooned is called the rather unequivocal name of jackass. Another is called a boodler, also in a rather unmistakable manner. This does not exactly look like humor, but like the giving vent to a spirit of vengeance long pent up. The author's of the programme are unmistakably soreheads, that is, they have been beaten and take this manner of expressing their disgust at their failure and defeat. The jackasses and boodlers in ques-

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tion can well afford, like the moon, to smile benignly at the little creatures that are wont to bark at her. By the way, it betrays a rare tact of delicacy and discretion, that one of the authors saw fit not to have his name figure at all in the dramatis personæ. Was hypertrophied modesty the reason?

The editor of this paper is referred to in this remarkable document as weakly Riesmeyer. They have our absolute absolution for committing this pleasantry. When a man is downed and does not know that he has been downed it is customary for him to belittle the strength of his victorious antagonist.

Armistice.

The dogs of medical war which has been raging for so many months on the St. Louis battle field have been chained for the present so far as this journal is concerned. We had a number of stunning articles in petto. But for ulterior reasons of higher medical politics we have shelved them and shall keep them in reserve for use whenever time and circumstances may call for them. One editor, who had been threatening through the public print in one of the sprightliest dailies) according to his own terms) that he would do us up in his next issue and make the proverbial mince meat out of our anatomy, has failed to come forward as promised. We had already sharpened our editorial pencil, looking forward to the fray with gleeful expectancy. To our great astonishment and disappointment the watchword in the last issue of that dapper editor's publication was "mum." Our interpretation is that the enemy's batteries have been silenced and our policy for the present, and probably the near future, will be benevolent neutrality.

The Diphtheria Antitoxine in the Paris Hospitals.

Whilst there are still some doubting Thomases, even among clinicians, who have had experience with the diphtheria antitoxine, as to the final verdict regarding the value of this remedy, the physicians of the Paris hospitals seem to be almost unanimous in the corroboration of the claims of its discoverer as well as his close followers in experimental research. Dr. Lebreton, Director of the Diphtheria Station in the *Hopital des enfants malades*, reports a mortality of 11.60 per cent, which would be reduced to eight per cent if cases, absolutely hopeless from the beginning, were excluded.

Dr. Legendre, from the Hopital Trousseau, reports a mortality of 12.5 per cent, but takes exception to some of the statements made by Roux that the diphtheria bacillus disappears at the same time as the pseudomembranes, for he found the bacilli in the saliva seventy-five days after the inoculation with the serum, although their virulency could not be demonstrated by the injection of guinea-pigs with the virus. Symptoms of great intensity, already described by other observers, were also noticed by Legendre.

They occurred one or two weeks after the first injection and lasted in a few cases from four to eight days. These were skin eruptions of a diverse nature, accompanied by a more or less high temperature. Excitation or depression of the nervous system, obstinate vomiting, general weakness, phosphaturia and urobilinuria. In consequence of his experience Legendre is opposed to any preventive injection of the serum and is in favor of the antitoxine treatment only in cases where the Klebs Loeffler bacillus has been proven to be present by bacteriological examination.

Moizard, who has treated 231 children with the antitoxine, reports a mortality of 14 71 per cent. Although this clinician has also observed the same symptoms of intoxication as Legendre; relating one of a girl, nine years of age, in which even dangerous symptoms developed, he is more optimistic than his colleague and is in favor of prophylactic injections, for since their introduction there have been no more cases of diphtheria infection taking place at the Hopital Trousseau. But it is a generally admitted fact that the immunization is of but a few weeks' duration, and one which has also been confirmed by the physicians of the Paris hospitals; Moizard, for instance, reports a case of diphtheria of the larynx which had been successfully treated with the antitoxine where the patient acquired a diphtheritic angina a month after dismissal from the hospital.

A feature of the antitoxine treatment which is not to be underestimated and which is mentioned by physicians who have used the remedy in a great number of cases, is the reduction in the percentage of tracheotomies.

CORRESPONDENCE

Three of the Faculty Resigned.

Editor MEDICAL REVIEW.—In the *Globe-Democrat* of January 28, 1895, appeared the following special dispatch from St Joseph:

"More trouble has fallen to the lot of the Northwestern Medical College of this city. Since the State Board of Health revoked its charter members of the Faculty have continued to quarrel. To day Drs. Weyman, S. L. Blair and E. Houston announced their withdrawals, which will necessitate a complete reorganization or a wind-up of the business of the College. Meanwhile some forty odd students are clamoring for a settlement of alleged indebtedness."

Now in reply permit me to say that there is no foundation in fact for the above statement.

1. The State Board of Health did not revoke the

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charter of the Northwestern Medical College of St. Joseph, but permitted the Institution to continue under its charter provided said College would comply with the law as to fixtures, instruments, etc., for teaching. This has been done.

2. There has been no quarrel among the Faculty proper, but the quarrelings and misunderstandings have been among the Directors, and this warfare is the outcome of financial differences that should have been settled among themselves and not allowed to become pub lic property to be twisted out of all likeness of their original form and intent.

3. It is further stated, that Drs. Weyman, Blair and myself have announced our withdrawal which would necessitate a complete reorganization or a wind-up of the business of the College. As to this, I will reply for myself, that no such intention has been entertained by me, neither have I made a tender of my resignation, neither do I calculate to do so. Regarding Drs. Weyman and Blair, I will say that if they have withdrawn from the chairs heretofore filled by them, I have no knowledge of their withdrawal, but on the contrary, I *know* that the former fills his chair regularly and promptly.

Knowing the facts as I think I do, and viewing the matter through the *Globe's* correspondent, I conclude that said correspondent's reportorial thirst for sensational garbage has led him beyond the pale of truth, or he or his informants are so pregnant with maliciousness that the only avenue of escape for such is through the ever-ready medium of the secular press, the last place that the true professional gentleman will go to, unless redress is to be sought and character defended before the reading public.

In conclusion, I take the further liberty to state that whatever quarreling, dispute and misunderstandings that have occurred with the Directors, the course of instruction has not been neglected, and the students, instead of *"clamoring for a settlement of alleged indebtedness,"* are attending the lectures as promptly as the average medical student. E. Houston, M.D.,
Instructor Materia Medica and Therapeutics, Northwestern Medical College.

Pollak's Case of Necrosis.—A Card.

Editor Medical Review.—In your issue of February 16, 1895, page 125, first column, in what purports to be the original paper on "Exfoliation of the Cochlea, Vestibule and Semi Circular Canals, Etc.," "read before the St. Louis Medical Society, January 5, 1895," I find Dr. Pollak's celebrated case of aural necrosis referred to with comments. This was not in the original paper; and its omission was, at the time, remarked by me, discussed by Dr. Pollak, and then satisfactorily explained by the essayist, as published in the same issue of the Review, pages 133, 134 and 135.

Inasmuch as this interpolation in your published version of the original paper—of course, without your previous knowledge or consent—is improper, and renders absurd the pertinent remarks of Dr. Pollak, the Essayist, and myself, you would greatly oblige me by correcting the error, in so far as to give this card publicity in your valuable columns.

Robert Barclay, M.D.

[The complaint of Dr. Barclay is a just one. By making changes in, or additions to, a paper after it has been read before the Society, an injustice is done to the gentlemen that have discussed the paper.—Ed.]

MEDICAL SOCIETIES

St. Louis Obstetrical and Gynecological Society.

Regular Meeting, Thursday Evening, January 24, 1895, the President, W. H. Ford, M.D., in the chair.

***

Ovarian Tumor of the Broad Ligament.

Dr. Prewitt.—The specimen I propose to present to-night is an ovarian tumor of the broad ligament. This was a young girl, single, who noticed some enlargement of the abdomen about last June. She thought for sometime that she was simply getting fat. When she came to me, about a month ago, she had grown so large that her whole abdomen protruded. I examined her and made a diagnosis of ovarian tumor of the right ovary. The uterus was pushed over to the left and had something a little peculiar about it; the sac did not seem to be specially pushed down into the pelvic cavity. Another physician who saw the case introduced a sound five or six inches. That struck me as being a little peculiar, because it did not seem to me that the uterus as far as I could make it out was specially enlarged, and was a little puzzling so far as the diagnosis was concerned that it should be an ovarian tumor with a uterus of such depth as that. The history pointed to an ovarian tumor. In the upper part of the abdomen, upon the right side, was quite a large solid mass. I was disposed to regard it as an ovarian tumor with some queer features. I said to the gentlemen who were present at the time of the operation, that there was something a little peculiar about it that I did not exactly understand; did not know what I might find; that it might be a cyst of the broad ligament, but I could not say. I did not expect to find a cyst of the broad ligament with a hard mass in it. On opening the abdomen and passing my fingers in I found a cyst with seemingly a good deal of vascularity about it and considerably enlarged vessels. I called attention to the fact that that was not a good indication. Over the surface of the tumor quite a number of vessels ran. In passing my fingers down under it I could find no pedicle at all. The uterus was at-

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tached to it, the Fallopian tube running directly onto it from the right cornu almost in a straight line. I am satisfied now that the physician who introduced that sound passed it into the Fallopian tube. Finding there was no pedicle whatever, I made an incision across the tumor and peeled it out completely.

DR. LUTZ.—Out of the peritoneum?

DR. PREWITT.—Peeled it out of the broad ligament. There was considerable oozing but not a vast deal of blood. The peculiarity of the thing was, that it was imbedded in the broad ligament, absolutely no pedicle. This is just as I peeled it out from the broad ligament.

DR. PAPIN.—How long ago since you operated on her?

DR. PREWITT.—Sunday. She has had some fever since. I had a good deal of trouble in draining that sac. I sewed it to the abdominal parietes and packed it with iodoform gauze, yet it oozed a good deal of blood.

DR. FORD.—Had she ever been pregnant?

DR. PREWITT.—Never was pregnant; she was an unmarried woman.

DR. MCPHEETERS.—Have you got the uterus there?

DR. PREWITT.—No, sir.

DR PAPIN.—Did I understand you to say that the uterus was pushed over to the left?

DR. PREWITT.—Yes; over to the left.

DR. FORD.—The uterus was pushed to the left then?

DR. PREWITT.—Yes, but drawn up, so the tube was stretched up over the tumor. The peculiarity of the thing was, it seemed to me, that it was an ovarian tumor, yet it was imbedded in the broad ligament, just like an ordinary tumor of the broad ligament. I certainly never met with anything like that before, and it is paradoxical to speak of it as an ovarian tumor of the broad ligament.

I have here another specimen. This fibroid was a rapiply growing affair. It was not so big, yet I thought it advisable to take it out.

DR. LUTZ.—Any history of hemorrhage in this case?

DR. PREWITT.—No; not much in either case.

DR. LUTZ.—I refer to the fibroid.

DR. PREWITT.—Oh, no; there has been no hemorrhage particularly. This girl with the cyst had menstruated regularly along every month ever since she had noticed the growth of the tumor.

DR. PAPIN.—No increase of diminution of the flow during the menstrual period?

DR. PREWITT.—No, I think not, and the uterus was not enlarged. It struck me as rather an anomalous condition of things. It might have been to all intents and purposes a tumor of the broad ligament, with all the characteristics of such a tumer, except that it was an ovarian tumor.

DR. FORD.—Very marked externally?

DR. PREWITT.—Oh, yes; in fact it had grown rapidly for the last ten days or two weeks before the operation, until it encroached upon the diaphragm and interfered to a certain extent with her breathing and was getting exceedingly uncomfortable. I postponed the operation for a week while she was menstruating. The very day or the day before I had set for the operation she commenced menstruating, so I postponed it for a week or a little over, about eight or nine days. In the mean time the tumor had been growing very rapidly from the time I first saw her until the operation. As I say, the unusual feature about it is that it presented all the characteristics of a broad ligament tumor so far as its position and its relations were concerned; there was absolutely no pedicle and I had to peel it out as I would a broad ligament tumor, and yet it is clearly an ovarian tumor. It was almost up to the ribs. Upon the right side you could feel the hard mass.

DR. MCPHEETERS.—What was the character of the fluid?

DR. PREWITT —It was not that of a broad ligament tumor, it was not thin and watery; it was characteristic fluid of an ovarian tumor, somewhat thickish and albuminous. The smallest cyst I punctured had a little blood in it, but whether it was done by the trochar or whether it was bloody already I do not know.

DR. MCPHEETERS.—What is the condition of the patient now?

DR PREWITT.—She is doing very well. I brought the sac up into the opening; it was oozing a good deal of blood and I packed it with iodoform gauze, leaving the point of the gauze sticking out. It swelled some and afterwards I could scarcely get a pair of forceps down into the opening and I had to put in a glass tube.

DR. GLASGOW.—How long did you leave the gauze in?

DR. PREWITT.—I left it in twenty-four to thirty-six hours. The glass tube which I inserted goes down now to the space from which I removed this mass—this tumor—and I wash it out through that, passing a small rubber tube through the glass tube; it runs out at the side of the small rubber tube through the glass tube. She has had no peritonitis, but she has had fever, in fact it had closed up so much when I drew the iodoform gauze out that at least two or three ounces of blood followed it.

DR. BOISLINIERE.—Was there much hemorrhage?

DR. PREWITT.—No, sir; I tied a number of large veins as I peeled it out, and of course quite a quantity of blood poured out.

DR. BOISLINIERE.—Did you remove the uterus?

DR. PREWITT.—Oh, no.

DR. BOISLINIERE.—Which side did I understand you to say it was on?

DR. PREWITT —It was on the right side.

DR. GREGORY.—Did you find any disease on the left?

DR. PREWITT.—I did not examine the left ovary. I was so much interested in getting this out and controlling the bleeding that it escaped me; I intended to do it, but forgot it.

DR. LUTZ.—The chances are it is diseased and you will have to do another ovariotomy.

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Dr. Prewitt.—I shouldn't be surprised.

Dr. Lutz.—Two weeks ago I did an ovariotomy and was about to put in the last stitches in the abdominal wall when my assistant said, "You have forgotten that ovary." I said, "We will let it alone." He insisted and on examination I found a tumor about the size of a walnut.

Dr. Prewitt.—I should not be surprised if it is diseased on the other side, but would not expect to find a broad ligament tumor.

Dr. Gregory.—Did you find the ovary on that side?

Dr. Prewitt.—Not on that side, except what is blended with that mass.

Dr. Gregory.—I can not understand how it is possible for it to be an ovarian growth without a pedicle.

Dr. Prewitt.—That is the peculiarity of the thing. There was absolutely no pedicle, any more than there is to that hat (indicating with derby hat). I simply cut across it and of course I cut the Fallopian tube. I couldn't get it any other way, and whatever ovary was ever connected with that thing is in that mass, and those cysts are certainly ovarian cysts, they are certainly connected with the ovary. A characteristic of a cyst of the broad ligament is that it contains a nearly watery fluid that is perfectly innocuous when extravasated in the abdominal cavity.

Dr. Lutz.—The direction of the growth of the tumor would be determined by the point from which it started on the ovary, wouldn't it?

Dr. Prewitt.—I think that is very likely.

Dr. Lutz.—If it started on that portion of the ovary nearest the broad ligament, why couldn't it have grown in that direction?

Dr. Prewitt.—That is the only possible explanation that I can see.

Dr. Lutz.—What was its relationship to the bladder?

Dr. Prewitt.—It was to the right side; the uterus was on the left side of the thing, and the bladder did not come in contact with it excepting where it spread out that way.

Dr. Lutz.—Didn't the pedicle that you made of the sac that you left draw the bladder up?

Dr. Prewitt.—Possibly it did, but I did not pay any attention to the bladder; had no occasion to do it.

Dr. Lutz.—What is the relationship of the anterior layer of the broad ligament to this tumor?

Dr. Prewitt.—It covered the cyst on that side.

Dr. Lutz.—In other words, the tumor was very close to the bladder anatomically?

Dr. Prewitt.—Yes.

Dr. Lutz.—Didn't you really lay bare a portion of the posterior wall of the bladder?

Dr. Prewitt.—Well, I would hardly say that, because there must have been a good deal of connective tissue between; I stripped it off from the connective tissue and just went in between this mass here and that wall was laid bare; the bladder was here in front no doubt, but I didn't pay any attention to it; had no reason to pay any attention to the bladder in the slightest.

Dr. Papin.—Didn't you empty it?

Dr. Prewitt.—No, sir; on the contrary I would have been rather glad if it had been full, because it would have shown the outlines then. I simply peeled out the cyst that was closed in by these two walls.

Dr. Glasgow.—I would simply mention a case that came to my hands the other day. It was a woman from whom I removed the uterus seven years ago, and it was a bad case too; that is, a portion of the vagina was involved by the cancer and I expected it to recur. I felt certain that she was buried years ago. She turned up here about two weeks ago, came to my clinic, a healthy, robust looking working woman. She had frequency of micturition and came to see about it. I made an examination and found a cystic mass filling up the pelvis, and another mass on the brim of the pelvis probably an inch and a half to the right of where the right ureter crosses the brim. It was firm, about the consistency of muscle and grew from the bone. There was another mass higher up in the belly near the lower margin of the liver. This growth from the brim of the pelvis, from the bony wall, led me to think it was a return of the malignant growth. I did not tell her so, or that any operation was necessary; told her to go home and that I would see her occasionally. I later examined under anesthesia but could not make out anything more. She improved under rest for a few days.

I operated on a woman last spring whom Dr. Boisliniere sent me. I had her come to the hospital with the intention of removing the uterus. I had previously made a microscopical examination of a portion cut off from the cervix. Someone frightened her and she made me promise faithfully that I would not remove the uterus. Of course, I separated the neck as high as I could and cut above the internal os, which was as hard as cartilage, perhaps harder, and the whole fundus was in this condition. If it had not been for my promise I would have taken it all out. It healed up and she felt better than she had for many years. A little discharge of pus took place from the opening one day this winter. She suffered no pain at all, but it worried her. She has had her monthly and the last time there was some pain. She came to my office and I examined her and found some resistance from above the scar. I will say right here that I examined the upper portion of the part that I cut off under the microscope and found that it consisted of old scar tissue, no cells at all. I could not find an opening into that uterus that would admit even a small probe. There was one there, because she had some flow, but not much. Then I put a knife in through the scar and could locate the end of the uterus very readily. I got quite a discharge of a very dark blood, apparently blood that had been shut in there for some time. I saw her the next day and found that I could put a sound in without any trouble. She had some bleeding since, but she has la grippe, and I rather think that the bleeding is due to the grippe and not due to any return trouble. Of course this collection of blood there after her menstrual period might have been sim-

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ply a collection of blood from this contraction. I do not lay much importance to this discharge of blood that she has now, because I have seen many patients, in fact I have another one at present with the grippe that has a uterine hemorrhage and a discharge of blood from the bowels also. So this case I look on as doing remarkably well, and it is barely possible that she won't have a return, but the chances are against it. I destroyed everything there that could be destroyed without removing the entire uterus. I removed, I suppose, four-fifths of it and cauterized what was left with the actual cautery.

Dr. Boisliniere.—I think Dr. Papin had some cases of that kind where he removed the uterus by curetting for cancer and never returned.

Dr. Papin.—Yes, sir. In a few cases I have seen the return of the malignancy, and I was impressed with the idea that there is constitutional cachexia of that cancer organ, if the circumstances surrounding the patient are somewhat similar to that which originated the tumor. Dr. Gregory reminded me of a case he saw over thirty-two years ago. The patient first called on me. She had an epithelial growth from the neck of the womb, well pedunculated, probably the size of my thumb. The physician who had been attending her would say to her, "Wait until your courses come and I will examine you." She finally got tired of that and sent for me. I examined her and found this tumor, about the size of a small orange. I ran my finger under it and made it bleed quite freely. She asked about the probability of an operation. Well, I thought she had about one chance in ten that she would not die on the table, but the only thing that could save her life. She said, "Well, I will take my chances then, you can operate to-morrow." I operated, Dr. Gregory, Dr. Carson and Dr. Yarnall being present. Dr. Yarnall shortly remarked, "It is hardly worth while continuing, doctor, because she is dead, sir." I looked at her and she was pulseless and did not breathe. I brought on artificial respiration, Dr. Gregory went on working with her, and when the tumor was finally extracted from the vagina a stream of blood that looked like a stick almost came right out with it. We immediately plugged the vagina with bisulphate of iron and cotton. Then Dr. Yarnall said, "She is bleeding again." We used injections of brandy and she was finally able to be removed from the table to a bed, and after we got her in bed I walked that floor like a madman for an hour at least. She opened her eyes and says I, "You are all right now; you are going to get well." For thirty years that woman was in apparently perfect health. Two years ago Dr. Gregory was attending to her, and his absence from the city induced her to send for me to see what I thought of her, and I found her dying of a cancer of the rectum—a carcinoma.

I remember a young woman living on Broadway who had an epithelial growth upon the ear. I cut it off several times, but it kept growing again and again. On one occasion I called on Dr. Gregory, as I had myself a little tumor on the ear which annoyed me. He said, "I will cut it off and cauterize it, because it might be an epithelioma." He cauterized it very neatly with a piece of nitrate of silver and I have never seen anything more of it since. Taking my cue from Dr. Gregory, I went down to see my patient on Broadway. I cut out the growth and cauterized it with nitrate of silver and it has never retured.

Another patient I had eight or ten years ago with an epithelial growth on the womb, brought on by an attempt to produce an abortion by use of a piece of whalebone. My younger son assisted me in removing this tumor completely. We used the scissors then dressed it with chloride of zinc five parts to the ounce, burnt it out very thoroughly. She recovered and remained well as far as I know even since until this last week. She called to seen me and her symptoms were suspicious. She began to have hemorrhages four or five months ago, lasting from eight to ten and twelve days, and she had had her last hemorrhage for seven weeks. I examined her carefully and I am satisfied that the epithelial growth has developed within the body of the womb itself. I think possibly in her case she may have hastened the thing, because she has remained a widow for four years and she has been sporting more or less ever since for the money she can make by it, and the consequence is she now has this return.

I do not know what the experience of the surgeons here present on that subject is, but it is a very interesting fact to know the possibility of these returns and the necessity of guarding against circumstances and conditions that would likely make them return again.

Dr. Glasgow.—Speaking of cancer, I remember a case of cancer that came in my office about ten days or two weeks ago. It was a woman of over 50, who had ceased having her monthly some years before, and last October she began to bleed, have a little bloody discharge, somewhat watery; it escaped off and on until it got to be pretty nearly continuous, when she came to my office. The history certainly was that of a cancer. I put her on the table and there was the uterus out between her thighs. The perineum was intact, had never been disturbed. I put the uterus back and put in a ring. She came back a few days afterward and everything was all right and she felt perfectly well.

Dr. Papin.—I saw a case, that of a yonng Irish girl, red headed, high tempered. She had a No. 9 Charter Oak cook stove to move and called in two men to move it. They said it was too heavy. In a fit of temper she picked up the stove herself and actually moved it several feet and then fainted. I was sent for and found the womb had penetrated through the hymen and was hanging there like a bell clapper. I replaced it, made her wear a ring for a long time, she finally married and bore children.

La Grippe.

℞ Antipyrin, - - - - - - - - - ʒj.
Syrup Hypophos. (McArthur), - - - - ʒiv.
M.
Sig. Teaspoonful four times a day.

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Tri-State Medical Society of Iowa, Illinois and Missouri.—Preliminary Announcement and Programme.

The next meeting will be held in St. Louis, April 2, 3 and 4, 1895.

Officers.

President—Dr. James Moores Ball, St. Louis.
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The Secretary announces that papers will be read by the following gentlemen:

Allison, W. R., Peoria, Ill.—Medical Evils.

Ash, J. R., Brighton, Ill.—The Influence of Malaria in Rhinological and Laryngial Work.

Babcock, Robert H., Chicago.—The Open-Air Treatment of Consumption.

Barrier, C. W., St. Louis.—Use of the Lever in Club-Foot.

Beard, Charles H., Chicago.—Treatment of Trachoma and Trachoma Sequelæ.

Brokaw, A. V. L, St. Louis.—Subject unannounced.

Brockman, D. C., Ottumwa, Iowa.—Tuberculosis of Bones.

Cale, George W., St. Louis—Subject unannounced.

Catto, W. M., Decatur, Ill.—The Uterine Sound and Curette.

Carter, J. M. G., Waukegan, Ill.—The Treatment of Functional Dyspepsia.

Cerna, David, Galveston, Texas.—Address: Recent Advances in Therapeutics.

Chase, Charles S., Waterloo, Iowa.—Food Adulteration—Its Cause and Prevention.

Conner, J. J., Pana, Ill.—Report of a Herniotomy.

Cook, George J., Indianapolis, Ind.—Inflammation of the Anal Canal.

Cordier, A. H., Kansas City.—Diagnosis of Intra-Abdominal and Pelvic Pathological Conditions.

Corr, A. C., Carlinville, Ill.—What is Scrofula?

Crowell, H. C., Kansas City—Subject unannounced.

Cullen, Gilbert I., Cincinnati.—Subject unannounced.

Dana, Charles L., New York.—Subject unannounced.

Davis, Edward P., Philadelphia.—Subject unannounced.

Dewees, W. B, Salina, Kansas.—Subject unannounced.

Dewey, Richard, Chicago.—Study of a Family of Four Degenerate Children.

Dorsey, F. B., Keokuk, Iowa.—Injuries to the Pelvic Floor.

Eschbach, H. C., Albia, Iowa.—Pleurisy with Effusion.

Etheridge, J. H., Chicago.—Subject unannounced.

Ferguson, A. H., Chicago.—Pathology and Treatment of Appendicitis.

Gant, S. G., Kansas City.—Treatment of Stricture of the Rectum.

Gibbes, Heneage, Ann Arbor, Mich.—Parasitic Nature of Cancer.

Guthrie, W. E., Bloomington, Ill.—Mucocele of the Frontal Sinus.

Hartley, H. A. S., Keokuk, Iowa.—Rabies.

Heflebower, R. C., Cincinnati.—Some Forms of Mastoid Operation.

Henrolin, Ferdinand, Chicago.—Subject unannounced.

Henry, W. O., Omaha, Neb.—Indications for Laparotomy.

Holland, Thomas E., Hot Springs, Ark.—Some Thoughts on Elimination.

Hollowbush, J. R., Rock Island, Ill.—Subject unannounced.

Holmes, Bayard, Chicago.—Osteal Tuberculosis Without Arthritis.

Hutchinson, Woods, Des Moines, Iowa.—The Economics and Ethics of Reproduction.

James, J. A. J., St. Louis.—Subject unannounced.

Jacobson, Henry, St. Louis.—Nocturnal Pollutions and Spermatorrhea.

Kelly, Webb J., Galion, Ohio.—When Shall We Amputate.

Kelly, Howard A., Baltimore.—Subject unannounced.

Keen, W. W., Philadelphia.—Professor Keen will hold a surgical clinic.

La Force, W. B., Ottumwa, Iowa.—Subject unannounced.

Lanphear, Emory, St. Louis.—Subject unannounced.

Lewis, E. R., Kansas City.—Ununited Fractures and Bone Lesions.

Lewis, Bransford, St. Louis.—Subject unannounced.

Loeb, H. W., St. Louis.—To Spray or Not to Spray.

Love, I. N., St. Louis.—Subject unannounced.

Lydstone, G. Frank, Chicago.—Subject unannounced.

McIntyre, J. H., St. Louis.—Subject unannounced.

Malone, L. A., Jacksonville, Ill.—Subject unannounced.

Mathews, J. M., Louisville.—Excision of the Rectum vs. Colotomy.

Meisenbach, A. H., St. Louis.—Subject unannounced.

Minges, George, Dubuque, Iowa.—Subject unannounced.

Milliken, Samuel E., New York.—Excision of the Elbow-Joint in Children.

Mooney, F. D, St. Louis.—Subject unannounced.

Meyer, Adolf., Kankakee, Ill.—Suject unannounced.

Moyer, H. N., Chicago.—Address on Medicine; The Relation of Infection to the Nervous System.

Norbury, Frank P., Jacksonville, Ill.—Electrotherapy of Sexual Neurasthenia.

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Oliver, Charles A., Philadephia.—Prof. Oliver will hold an ophthalmic clinic.

Paquin, Paul, St. Louis.—Subject unannounced.

Patrick, Hugh T., Chicago.—Hysteria and Organic Disease of the Nerous System.

Park, Roswell, Buffalo.—Subject unannounced.

Percy, James F., Galesburg, Ill.—Subject unannounced.

Pearse, H. E., Kansas City.—Gastric Neuroses; Their Diagnosis and Treatment.

Punton, John, Kansas City.—The Stigmata of Nervous Diseases and Their Utility in Diagnosis.

Redur, Francis, Hannibal, Mo.—Subject unannounced.

Ricketts, B. Merrill, Cincinnati.—(*a*) Epilepsy—Removal of Cerebral Cyst; (*b*) Typhoid Ulcer, Perforation; Operation.

Ridlon, John, Chicago.—Subject unannounced.

Robinson, Fred Byron, Chicago.—Address on Gynecology; Observations in the Peritonum in Fifty Autopsies.

Sisson, Ellet Orrin, Keokuk, Iowa.—Ophthalmia Neonatorum.

Stucky, Thomas Hunt, Louisville.—Subject unannounced.

Walker, Edwin, Evansville, Ind.—A Clinical Report on Thyroid Extract.

Waugh, W. F., Chicago.—Narcophilia.

Weymann, M. F., St. Joseph, Mo.—Treatment of Chronic Suppurative Middle Ear Disease.

Wilder, Wm. H., Chicago.—Tumors of the Eyeball, with Specimens.

Wirt, Wm. E. Cleveland, Ohio.—The Hysterical

Wishard, W. N., Indianapolis, Ind.—Subject unannounced.

Element in Joint Diseases.

Wyeth, John A. New York.—Address on Surgery.

ABSTRACTS

MEDICINE.

Starvation Insanity.—The *Nouvelle iconographie de la Salpetriere* for December, 1894, contains an interesting article in which M. E. Brissaud gives an account of a case which had come under his observation. The patient, a girl nineteen years old, had fallen on her right hip about ten years before the author saw her. This was followed by a painful swelling, which rapidly disappeared, and left in its place a painful condition of a psychical nature, which persisted for many years. At certain times it was uppermost in her mind and, by an association of ideas, brought on various troubles, such as swelling of the abdomen and vomiting, or else angina and syncope, etc. In the beginning, a very excusable error in diagnosis was made in calling the disorder coxalgia and in prescribing treatment appropriate to that disease. Subsequently, when serious symptoms intervened in consequence of this error, it was thought to be an ossifluent absess with peritonitis, and, if the patient's general condition at that time had permitted, laparotomy would have been performed.

The appearance of these disorders following hyperesthesia of the hip is, says the author, on the whole, easy to understand. It was but a fresh example of hysteria simulating coxalgia, peritonitis, etc. With regard to the mechanism which governed the association of all these ideas, it is probable that the physician's dignosis, his questions, his examination, his treatment, etc., were not without their influence on the patient. It is also easy to understand how the idea of starving herself became a fixed one in her mind. When she was about sixteen years old she was an object of ridicule among her companions because of size, and, in her nervous condition, the disire to reduce flesh became a mania, and, in order to realize this desire the surest and the simplest way was not to eat, or to vomit whatever she had eaten, and she began systematically to refuse food and to vomit. She lost flesh rapidly and two or three times was at the point of death. At one time, in an access of religious frenzy, she was suddenly cured by taking two teaspoonfuls of Lourdes water. Another time, imagining that the Virgin had abandoned her, she concluded that she was a great sinner, and accordingly she made a number of confessions and stated that she had committed many sins, and as the Virgin had not found her worthy of pardon, she would die in her sins. All this, says M. Bissaud, is the logical result of this form of delirium.

In this condition she was brought to the hospital on April 17, 1894. Her face was vacant and emaciated, and it had an old look. The bones of the face, the shoulder blades, the ribs, the vertebral apophyses, the bones of the pelvis, and those of the limbs were very sharply defined. The skin was brown, wrinkled, flabby, and dry, and hung in folds over the parts it covered. The hair was dry, and thin in spots, particularly behind the ears, where two pathes of alopecia were to be seen. The nails were irregular, and the patient gnawed them incessantly. The fatty tissue had almost entirely disappeared and the muscular tissue probably shared in this emaciation; but it was especially the adipose pannicle that had suffered the most from this starvation. The respiration, the circulation, the digestion, and the urinary organs seemed to be normal. The pulse was small, but regular; the temperature was perceptibly lowered, scarcely reaching 95.8° F. The region of the hip and the coxo femoral articulation showed no symptoms of coxalgia, and all pain, whether spontaneous or induced, had disappeared. Moreover, it was impossible to discover any sensitivo-sensory mark of hysteria, and in spite of this bodily decadence the physical strength was relatively well preserved. She walked

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naturally, although rather slowly, and without much fatigue.

Her mental condition was equally troubled. She always answered correctly any question that we put to her, but she appeared sad, apathetic, and indifferent. She seemed to be preoccupied with thoughts of remorse, of guilt, and of damnation. In the month of November, 1893, she had again gone to confession, but the relief obtained from this was only temporary, for she soon recalled other sins that she had committed, and these ideas became fixed.

After reminding the patient of the utter want of sense in these thoughts, of the dangers of the progressive starvation, and of the immediate necessity of eating, M. Brissaud told her that, if she did not eat willingly, he would have to resort to the use of feeding-tube in order to give her nourishment. This threat appeared to frighten her, for she took the food that was given her without any objections and without reluctance. One beefsteak, a pint of milk, and two plates of soup were ordered every day until the April 22, when eggs were added to the diet, and after the 24, she was allowed to have vegetables. She was also ordered to remain in bed for the greater part of the day. The patient was subjected to this treatment without change for nearly three months, and no pathological symptoms were observed during this poriod, except slight vomiting and diarrhea; the appetite was excellent and the digestion perfect. The favorable results of this treatment manifested themselves very quickly, and in less than three months the patient gained double her weight; the skin regained its color and its functions; alopecia no longer existed; the subcutaneous tissue was well provided with fat, the bones ceased to be conspicuous, and the outlines of the body became normal. Her strength and vigor also increased in direct proportion. Moreover, her mental condition had undergone a like transformation; her idea of guilt and damnation had ceased to exist, all traces of religious delusion had been effaced, and both physically and psychically she might be considered as permanently cured

These, says M. Brissaud, are the principal details in a long history. It seems to him that the patient was a true hysteric. The former existence of syncope and pseudo coxalgia would seem to prove it, and the evolution, also of the symptoms, their rapid cure, the unexpected return, all point to an hysterical origin. The study of the case from a psychological point of view is also well calculated to remove all doubts on the subject. It shows in a startling manner the origin and the filiation of the symptoms.

The author calls attention to another point in this curious case—namely, the patient's rapid return to her former weight. Such a rapid increase after convalescence from debilitating organic diseases does not occur; these sudden changes are observed only in hysteria. After an organic disease the influence of the nervous system on nutrition is generally exercised slowly and imperceptibly. Without doubt, he says, among hysterics this trophic influence is hastened by a fixed idea of reganing health and strength, and under these conditions marvelous results are rapidly produced, and this rapidity of restitution is analogous to that of starvation. Under the influence of a fixed idea we see the hysterical person starve with an extraordinary facility and soon arrive at the stage when marasmus and consumption set in. It is only exceptionally that the physical decline exceeds these limits, but when it does, no matter how vivid the fixed idea of recovery may become, death is inevitable. *N. Y. Med. Jour.*

Cod-Liver Oil: What is It?—Ever since 1841, when cod-liver oil was so strongly advocated by Bennett, it has held a prominent place in the confidence of physicians. From this date we find that many and careful studies have been made, so that we may say that its scientific use is of comparatively recent origin, although it has been employed empirically for nearly 200 years. The chemistry of this subject is by no means, even now, complete, although many analyses have been made, so that at intervals one finds in the literature various hypotheses as to what ingredients this remedy's virtues may be attributed to. In spite of discordant theories and the contradictory results of chemical analysis, cod-liver oil is still regarded as a remedy of the highest value in diseases marked by malnutrition, of which pulmonary tuberculosis is the most frequent occasion for its employment.

What then can be said of its composition? Briefly, it is principally, first, olein glyceride (70 per cent) with variable quantities of stearin, palmitin (nearly 25 per cent), and myristin glycerides, the latter increasing with the darker color. So far no controversy has arisen beyond the unconfirmed statement of Winckler (1852) that glycerin could not be obtained from cod liver oil, which he regarded as a whole, containing propyl oxide. Second, iodine, in from 0.0012 (Bird) to 0.004 per cent (de Jongh), its presence first demonstrated by de l' Orme, but even now it is not known in what form it exists. On the other hand, several observers have failed to detect it in all specimens. Third, bromine. Fourth, phosphorus: as pre-existent phosphoric acid, 0.0789; as obtained by total oxidation of the oil,0.1047 per cent (de Jongh). Fifth, sulphur. Sixth, biliary acids. Seventh, free acids, calculated as acetic acid, 0.01 ao 1.80 per cent (Charles, 1882), and regarded as butyric and acetic acids by de Jongh(1849). It is quite likely that free oleic, palmitic and stearic acids exist in the oil. Eighth, gaduin, $C_{35}H_{46}O_9$, identical with morrhuic acid (Gautier and Mourgues, 1888), existing as an unstable compound resembling lecithin, and in contact with acids and alkalies decomposing into morrhuic acid, $C_9H_{13}NO_3$, phosphoric acid, and glycerin. Ninth, gadic acid (Luck, 1857), deposited from light-brown oil.

Under the name of morrhuolins are included the so-called alkaloids of cod-liver oil: morrhuic acid mentioned above; dihydrolutidin, $C_7H_{11}N$; asellin, $C_{35}H_{33}N_4$;

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amylamin, $C_5H_{13}N$; oxycollidin, $C_8H_{11}NO$; morrhuin, $C_9H_{17}N_3$; nicomorrhuin $C_{20}H_{28}N_4$; the last four being the most active. Gautier and Mourgues found, however, in yellow oil six definite bases: butylamin, amylamin, hexylamin, dihydrolutidin, asellin, morrhuin and morrhuic acid. It will be observed that they failed to find oxycollidin and nicomorrhuin. So far as the oily constituents, iodine, bromine, sulphur, phosphorus, biliary substances and free acids are concerned, there is virtual agreement in the results of analyses.

As to the so called alkaloids, or definite bases, there is abundant opportunity for criticism. It is remarkable that they are most abundant in the brown oils, and from these is commercially obtained morrhuol, the name applied to an alcoholic extractive derivable from cod-liver oil and of probably indefinite chemical structure. Similarly the term "gaduol" has been employed. Presumably morrhuol, which according to Lafarge (1885) is a very aromatic substance of a sharp, bitter taste found in brown oils 4 50 to 6.00, yellow oils 2 50 to 3.00 and in white oils 1.50 to 2 00 per cent, contains most of the so called alkaloids, together with the iodine, bromine, and phosphorus, and is the substances which is supposed to represent the active principles of the oil.

The physiological properties of the seven alkaloids have been determined by Gautier and Mourgues to be as follows:

Butylamin: In sufficient doses this produces in animals fatigue, stupor, vomiting, and a certain degree of paresis. In small doses it excites the urinary secretions, in large doses it is at the same time convulsive and paralyzing; in medium doses it throws the animals into a sort of somnolence, with muscular paresis, but with complete conservation of the intelligence. Although poisonous, it does not produce death unless given in very large doses.

Amylamin: This is a very active base. In small doses it excites the reflexes and the urinary secretion. In large doses it provokes convulsive trembling, then regular convulsions and death.

Hexylamin acts almost like amylamin, but with less intensity,

Dihydrolutidin is a rather toxic base, even in small doses, when it produces a notable diminution of sensibility. In large doses it provokes trembling and convulsions in the muscles of the face. With still larger doses in a guinea pig the trembling increases and becomes more general. Very lively periods of excitation are followed by profound depression with insensibility and paralysis of the muscles, especially of the posterior members. The animal gradually goes into an asphyxiated collapse.

Asellin is only a feebly active base. In sufficient dose it produces dyspnea, stupor, convulsive troubles, and in large doses death.

Morrhuin is one of the most active principles of the oil; it is also in larger quantity—a little more than 1·3 of the total alkaloids. This is believed to be a powerful stimulant to the functions of nutrition and assimilation, producing a rapid circulation of the extractive residues of cell life toward the blood and kidneys, where they eliminated, and in this way provoking indirectly a powerful movement of the assimilation. Virtually it is believed to increase the appetite and to provoke diaphoresis and diuresis.

As we read the results of these experiments, we cannot but be impressed by the fact that these symptoms are the symptoms of ptomanie piosoning. And when one remembers that the process of manufacturing hitherto employed is such that putrefaction is an important factor in the production of the oil, as anyone will testify who has visited the North Cape, where the stench encountered upon the journey is as prevalent and as repulsive as that found near the menhaden-rendering works of the Atlantic Coast, the impression becomes a certainty. Without doubt, the alkaloids contained in morrhuol are putrefactive or cadaveric alkaloids, and these amylamin, asellin, dihydrolutidin are assuredly poisonous and are so classified in Gould's table as modified from Vaughan and Novy. Amylamin can also be obtained from horn and from putrid yeast. Morrhuin, as it stated above, is probably diuretic and diaphoretic. Butylamin may or may not be toxic; it is quite probably the latter. That any of these alkaloids are present in cod-liver oil when prepared at the place of the fisheries, by a proper process, is extremely doubtful. So far as I can learn, no analyses have been made of such cod liver oil. To assume that merrhuol represents in any way the active therapeutic properties of cod liver oil is useful only in the proportion that it is putrefied. My attention having been called to the reports of Lafarge (1885), and later of Germain See, I experimented with morrhuol for several months, and finally, convinced of its absolute failure, I abandoned its use. I was so thoroughly positive of its uselessness that the paper of Bouillot did not induce me to repeat my observations. If there are any medical properties in the preparations of the so called active principles from which oil is removed, or which are removed from the oil, they must be entirely due to the other substances with which they are incorporated. The substitution of active principles in place of crude drugs is praiseworthy, when it is proved that these active principles represent the properties of the drug or possess in themselves definite physiological action. No digitalin, nor digitonin, nor digitoxin, has yet been isolated which fully represents digitalis; why then need we expect that alkaloids shall represent cod liver oil, even if they arise from it putrefaction?

To what than can we attribute the beneficial action of cod liver oil in wasting disease? That cod-liver oil is a food, a food or especial value, because of its peculiar properties.

To quote Farquharson: "It has been proved by experiment that animal are more digestible than vegetable oils, and cod-liver oil is the most readily assimilated of all. After being emulsified by the pancreatic juice, in comes in contact with the bile, which distinctly

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increases its power in passing through moist animal membrane; and it is probable also that the biliary principles incorporated in its own structure aid in enabling it to be easily absorbed by the lacteals. Its action in the system is to improve the general constitutional tone, to evolve force and heat, and to aid in supplying those fatty elements which are so essentially requisite for the construction and repair of the tissues. It supplies the fatty matter on which the proper functions of cell growth and development depends, the nuclei in the cells being formed of fat."

The free fatty acids contained also aid in emulsification and absorption from the alimentary canal. It imimproves the nutrition and supplies the fatty ingredients necessary for the growth and repair of the nervous system. It improves the quality of the blood, increasing the number of the red corpuscles, and strengthens the heart muscle. Although the quantity of iodine, bromine and phosphorus is small, so far as their influence goes they are of use. Brunton has pointed out that because it nourishes the young epithelial cells of the bronchial mucous membrane, enabling them to grow instead of being converted into pus, it is of undoubted efficacy as an expectorant. Thousands of lives would undoubtedly have been saved, had the profession understood that beef tea, as formerly made, containing scarcely more than the soluble extractives, possesses about as much value as a nutrient as urine.

Shall we now go on to administer the extractive of cod-liver oil, cadaveric alkaloids of demonstrated poisonous properties—of which the best that can be said is that one is diaphoretic and diuretic in its action and increases the appetite — and discard the really valuable constituents, which make up the food? A tuberculosis patient can generate a sufficient amount of ptomaine without any assistance from the physician. It is the prevention of the formation, not elimination, that one seeks in treatment. An analogous procedure would be the administration of beef-tea made from putrid meat.

The use of the extractives of cod-liver oil is no new idea. In 1866, an extract, an evaporated watery extract, made from the liver in preparing the oil, was used. It soon fell into disuse. Granting that the ptomaines of putrid oil are harmless—which is as yet by no means proven, for the quanity in which they have been administered has been too small for any definite conclusion—if there are any remedial properties in the extracts or wines it must be in the substances incorporated with them, but which are better administered separately.

How then shall we prescribe cod-liver oil? By emulsions, which are heavily charged with mucilage and contain water which favors rancidity? Of all which I have used—and every one which I could obtain has been used in my hospital and dispensary service—but one has been satisfactory, and that only when freshly made. For fourteen years I have used an oil of which the only recommendation it claimed was that it was obtained from fresh livers by cold expression. It was of American origin, and on that account was not obtained from the cod when in good condition as when off the shores of Norway. As it was, its use was far more satisfactary than that of emulsions or mixtures of whatever sort.

During the past few months I have used with great satisfaction the Improved Lofoton Cod-liver Oil made by Parke, Davis & Company, which is simply an oil obtained on the site of the fisheries from the livers of the fish at the time they are taken from the water. The process of manufacture is carefully carried out so that absolute cleanliness and freshness of the material shall be secured and that no decomposition shall take place. The disagreeable odor and flavor is removed, bnt no constituent important for it use as a food is taken out. Specimens kept for months have as yet shown no change. The problem seems to be solved. A food to be of its highest usefulness must be palatable; the most weighty objections is now done away with.

The oil should be given during the height of pancreatic digestion, one or two hours after eating, so that it may pass rapidly through the stomach and be absorbed during, intestinal digestion. The stools should be watched that more shall not be administered than can be absorbed. If the oil should "repeat," a fact which I have not as yet observed, a few drops of ether added to the dose is likely to obviate that difficulty. The dose is from one to six teaspoonfuls. My conclusion are:

1. Cod liver oil is a food, important because of its peculiar properties.

2. Since it is a food, no extractive can represent its value.

3. The purer the oil—the more free from cadaveric alkaloids—the more palatable will it be and the better adapted for its purpose.

4 The best that can be said of the cadaveric alkaloids is that they may possibly represent its eliminative, they certainly do not represent its reconstructive properties.

5. It is proven that the administration of appreciable quantities of the cadaveric alkaloids is devoid of danger.—Reynold W. Wilcox, M.D., LL.D.

Elimination of Toxic Substances from the System in Acute and Chronic Diseases. —Dr. Alb. Albu (*Berl. Klin. Woch.*) says: Advances in bacteriological research have taught us that the part played by bacteria in pathological processes is limited practically to the formation of local foci, whereas the general symptoms noticed in the course of many acute and chronic diseases are to be acribed to the action of the substances produced by the bacteria in the system.

Now, these substances circulate in the blood, are diffused into the various tissues, and must be eliminated, at least partly, through the secretory and excretory channels. Starting with this idea, the author has en-

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deavored to derive these toxic substances from the urine, perspiration, feces and vomit.

His examinations, sixty-four in number, are made largely in cases of phthisis, uremia, carcinoma of the stomach, Basedow's disease and cholera. The methods employed are those or Stas-Otto, as modified by Griffith Luff, of Baumann and of Brieger.

Whatever method be used, it is necessary to have large quantities of the excretion for examination, thus, 8 to 10 liters of urine are required in order to arrive at any definite result. And the excretion employed for the purpose of determining the presence to toxic substances must be the first that is voided after the beginning of the disease.

In the course of this examinations the writer has derived alkaloidal bodies more often from urine than from matter vomited, and has failed entirely in isolating any such body from feces.

In no case could there be instituted an elementary analysis, as the amount of the extract obtained was too small, and it was found that on making the alkaloidal tests with the substances, even when derived from the urine of the same disease, a positive result would rarely be gotten with all the tests, some substances answering some tests, others others. Thus, it is as yet impossible to state positively the chemical characteristics of the alkaloid derived from the urine of any particular disease.

In the author's case of tetanus, he employed a method of his own, being a modification of that of Brieger, and he succeeded in obtaining a very small amount of a substance in the form of a double salt of platinum. This case of tetanus the author had under hospital observation for six months, and found the above substance in the urine when the patient had convulsions, whereas, no such substance could be determined when the convulsions were absent. A very interesting and significant point in this case is the fact that when the disease was at it height, and the patient was seized with convulsions almost daily, the convulsions would stop as soon as copious diarrheal discharges from the bowels were effected. The post-mortem examination of this case showed no important pathological changes. These facts led the author to believe, with other German writers, that tetanus is the result of autointoxication from the intestinal canal, dependent upon a faulty intestinal digestion, from the final products of which certain toxic substances are formed, which substances, being retained and absorbed, act as irritants to the nervous centers.

The writer then reverts to the possible sources of error in the examination, calling attention to the fact that in one case the resulting substance was found to consist partly of crystals of chlorids of ammonium, in another chloride of sodium crystals, and in a third peptone could be detected even after trying carefully to eliminate that substance.

We are not justified, says the author, in considering the substance poisonous, even though its administration prove fatal to animals, because, he says, one cannot positively exclude the action of the alcohol used in making the extraction. He avoids this error by employing methods in which ether is used instead of alcohol.

It does not seem likely to the writer that these substances are toxines in a bacteriological sense, as he has found such substances closely allied to one another in diseases not known to be of bacterial origin, and having only one characteristic in common, viz., an abnormal chemical metabolism, or, in other words, a hightened disintegration of the proteids.

As a result of this experiment the author finds that it is a difficult matter to extract these toxic substances from the urine, etc., owing to the absence of satisfactory methods of examination, that they are, however, eliminated through the second excretory channels, but that, as yet, it is impossiple to get a clear idea of the chemical composition and of the biological importance of these substances.—*Amer'n Med. Surg. Bull.*

Cholera Immunity and Susceptibility to the Disease.—Dr. El. Metschnikoff, (*Wien Med. Presse*) says, it is a well-known fact that while certain places present a favorable soil for the development of cholera, others seems to be immune to it, and that in places where the disease is endemic there are always a large number of persons who are immune. Experiments have shown that some people may introduce into their system a considerable quantity of cholera bacilli without developing cholera. Metchnikoff considered it quite probable that the bacteria of the digestive canal had a certain influence in this matter, and made experiments to show the action of different bacteria upon the cholera vibrio. He found that some organisms favored the growth of the vibrio, whereas others retarded it. Different bacteria would cause a rich growth of vibrios on plate cultures, which, without the action of these bacteria would not develop at all. Among these bacteria which favor the development of such cultures, certain sarcinæ and the white yeast known as torula are important, especially the latter, which does not liquefy the gelatin.

On the the other hand, there are bacteria which entirely prevent the development of the vibrio, and among these may be mentioned the bacillus pyocyaneous which, however, liquifies gelatin and a coccus isolated from the air, cultures of which on a solid medium are white. M.'s experiments showed conclusively that the development of the cholera vibrio is greatly influenced, either hastened, retarded or even prevented by organisms in the neighborhood of the vibrio.

The next step was to determine whether these facts could in any manner influence the development of cholera in animals. In making these experiments M. selected young rabbits, which are known to be very susceptible to the cholera poison, and by the introduction of a combination of sarcina, torula and a bacillus belonging to the group of coli bacilli, and immediately after a culture of cholera vibrios only two out of twenty-

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two animals remained alive, the others all died thirty-six to forty-eight hours after this experiment. The introduction into the stomach of the cholera vibrio alone produced death very slowly, in about six days, in only half of the animals; the others remained well.

The pathological changes are typical and are principally located in the small intestine, which, especially in upper portion, is always hyperemice, expanded throughout its entire length and filled with a turbid mucous fluid. The cecum also contains a large quantity of a serous fluid. The stomach is usually normal. Bacteriologically, also, the small intestine and cecum are found to contain enormous numbers of the cholera vibrio, which is seldom found in the stomach, though frequently in the gall bladder. In a quarter of the cases it was found in the blood. The congestion of the intestine is already apparent 4 hours after the introduction of the poison. The cholera vibrio has been found to pass the acid contents of the stomach even without the aid of the other bacteria. The bacteria of the stomach and intestines are as yet known very little, though sarimæ, and especially different forms of yeast have been found in many cases.—*Amer'n. Med. Surg. Bull.*

Physiology of Intestinal Peristalsis.—Grutzner (*Deutsch. Med. Wochnschrift*) has demonstrated that although as a rule fluids introduced into the rectum are at once absorbed, in some cases, however, he observed that colored fluids introduced into the rectum of animals could be detected some hours later in other portions of the alimentary canal and especially in the stomach. This led him to a series of experiments, and employing small solid particles he found that they would be transported to the stomach after introduction into the rectum. He observed that if a small quantity of a mixture composed of equal parts of powdered animal charcoal and 0 6 per cent salt solution were injected into the rectum of an animal, which had been allowed to fast for twenty-four hours before the introduction of the mixture, after the lapse of about four to six hours, the animal being killed, small quantities of the charcoal were present in various parts of the intestine, but particularly in the stomach. In carying out a similar series of experiments upon the human subject, using starch and table salt for the purposes, G. found that after some hours the starch could be detected present in the contents of the stomach.

The cause of this antiperistaltic movement G. ascribes to the chemical consistence of the fluid with which the particles are mixed, this upward movement invariably taking place when the substances were mixed with a weak solution of table salt seems to act directly upon the mucous membrane of the rectum and occassions this "upward movement," or antiperistalsis. The upward movements takes place in spite of the large masses of fecal matter driven downward, but are confined however, only to the peripheral portions of the intestinal lumen.

Influence of High Pressure on Microbes.—Dr. Roger, in a recent paper, thus summarizes our knowledge upon this interesting subject:

"It appears to have been established by numerous experiments that compressed gases attenuate and destroy bacteria, but no attempt has been made to ascertain the effect of simple compression of culture fluids, until I undertook two series of experiments in this direction. . rst employed an apparatus capable of producing a temporary compression equal to 250 kilogrammes. Cultures of the staphylococcus aureus, the streptococcus of erysipelas, the bacillus coli, and the bacillus anthracis, both sporulous and non-sporulous, were subjected to five or six shocks in succession without producing the least effect on the microbes.

"I then subjected the same cultures to stronger pressure, varying between 1000 and 3000 kilogrammes per square centimeter, that is to say, from 967 to 2903 atmospheres. Under these conditions, the staphylococcus and the bacillus coli were not at all affected, whereas the sporulous anthrax bacillus was slightly attenuated at 3000 kilogrammes. The non-sporulous anthrax bacillus was able to bear without ill effect a pressure of 1000 kilogrammes; while 2000, and especially 3000 kilogrammes, killed a large number of rods. Those which remained produced in guinea-pigs only a chronic affection, which ran its course in from fifteen to twenty days, whereas the control animal died within three days. The streptococcus was also modified by a pressure of 3000 kilogrammes, some of the microbes being killed, while those left developed more slowly and were less virulent than before; on being introduced under the skin, they gave rise to a curable form of erysipelas, while before compression subcutaneous inoculation produced fatal septicemia.

"The conclusion is that a very curious difference exists between the sensitiveness of bacteria to the action of compressed gases and their resistance to simple increase of pressure. They must be subjected to a pressure of 2000 or 3000 kilogrammes before perceptible changes are produced in some of them. The variations of pressure which take place on the terrestrial globe, consequently, have no influence on the virulence of pathogenic agents. Lastly, from a practical point of view, the hope must be abandoned of sterilizing fluids by means of repeated shocks."—*Modern Medicine.*

The Early Diagnosis of Pulmonary Tuberculosis.—Professor Potain, Paris, calls attention to the following points of interest in the diagnosis of incipient phthisis:

"Diminution of resonance is always relative, and must be elicited by comparison of the two sides; there are individuals whose supra-spinous fossæ are normally but little resonant. Percussion of these fossæ is a delicate matter. Have the patient sit slightly inclined forward, with both shoulders on a level and the arms hanging loosely at the sides. Percuss with equal force in both. Sole diminution of resonance of the apices is suf-

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ficient to diagnose tuberculosis, though in most individuals the right lung is slightly more resonant than the opposite. Yet the contrary may be present in tuberculosis, or increased sonority from the presence of bronchitis; a limited area of augmented resonance in the apex is also suspicious. It is generally accompanied by symptoms assisting diagnosis. Auscultation will reveal a weakened and rougher respiration. Feeble respiratory murmur is also a relatively valuable diagnostic sign. In the normal state two kinds of murmur are produced in the lung—the vesicular and the bronchial—the former predominating, and being the only one distinctly heard. If the vesicles contain solid material, this murmur disappears, and only the bronchial one is audible. Hence it is a proof of more or less local solidification. Expiration is apparently longer than inspiration. On auscultation the vesicular murmur is interrupted by slight and confused murmurs of bronchial origin. Also respiration may be short and "catchy," from convulsive action of the respiratory muscles. The vocal resonance as well as the thoracic vibrations are increased. Hoarse and sibilant rales are perceived on auscultation, at the beginning; in the vertex these assume a peculiar character They are heavier, and of a more vibrating sound. Laennec traced them to a softening of the tubercles; this is true, yet they may be perceived from the very beginning. They are due to a bronchitis, and, if located in the apex, are tuberculous in nature. The second sound of the heart may also be transmitted through the lung with greater clearness. In short, the signs of pul monary condensation and those of bronchitis; their lo calization in the apex is characteristic of tuberculosis. If the disease has localized itself in some other portion of the lung besides the apex, bacteriological examination of the sputa will be necessary, though, unfortunate ly, just at the very stage when the diagnosis is liable to be doubtful, the bacilli are apt to be exceptionally present. They are to be found chiefly when the other signs are pronounced and certain."—*Modern Medicine.*

Maltine with Coca Wine in Treating the Aged.—The invigorating effects of coca are too well known to require repeating. How the natives of Peru take long journeys without food, being sustained only by coca leaves is one of those oft' told stories at first disbelieved, but now known to be a fact. Biddle says it is indicated in cases in which we desire to check tissue waste, and in attempting to conserve the energies of the aged we should always keep in view the fact that the reparative processes in old people are weak and we must sustain them, especially after acute debilitating diseases.

Combined with maltine, coca wine makes one of the best tonics I know of when we wish to get immediate results. I have used it in my private practice and at the Old Ladies' Home in a number of cases this winter with very gratifying effects. My patients at the home have ranged in age from seventy to ninety years and one of the difficulties I have to contend with is to find some thing the stomach can retain. In two cases I had tried nearly all the foods and tonics I could think of with the same result, they could not retain them. I then determined to try maltine with coca wine. I have not yet seen one whose stomach refused it, taken as prescribed, after meals. I will not attempt elaborate clinical reports but will transcribe some notes of cases illustrating its efficacy.

Mrs. McD., aged 86; had la grippe, followed by persistent bronchitis, cough tight, sputum hard and scanty, as she discribed it like buttons. She kept getting weaker, had no appetite. After she had been taking maltine with coca wine two weeks the cough had almost disappeared, the appetite had improved and she was feeling much improved. In fact she reported that she felt stronger than she had in months.

Mrs. T., age 72; la grippe, acute bronchitis, followed by general debility and attacks of heart failure. I fully expected that she would die at almost any time; she was extremely weak and short of breath; I endeavored to stimulate her but with very little effect, she was getting weaker every day. The maltine with coca wine was then resorted to and the improvement was promptly apparent. She is now able to be up and around, has a good appetite and is feeling comfortable.

Miss C., age 82; has been troubled with a weak stomach and been under treatment for it for a number of years; she was very feeble and gradually wearing out, her extremities were cold and partially numb up to the knees. She was able to retain the maltine with coca wine and has improved steadily since she began the use of it.

It is unnecessary to report other cases as their histories would be but little more than a repetition of those above given.

I consider maltine with coca wine one of the best invigorating tonics we have for old people and it has the advantage over the other and various preparations of coca wine of not only being a tonic but also a food and digestive agent.—Everett W. Russell, M D., New York.

SURGERY.

The Surgical Treatment of Diffuse Septic Peritonitis.—At a recent meeting of the Royal Medical and Chirurgical Society of London (*The Lancet*), Mr. C. B. Lockwood read a paper on the "Surgical Treatment of Diffuse Septic Peritonitis," and related some successful cases. The communication began with the remark that the term "diffuse septic peritonitis" probably included several kinds of disease. In the variety referred to by him the inflammation was acute and had no definite limits; the serous membrane was smeared with lymph, which was either transparent and oil-like or collected in ashen-gray fibrinous flakes. Adhesions were absent, or very slight; the peritoneal cavity con-

tained thin purulent fluid, which often had a fecal odor, or it might be full of gas; the intestines were distended and paralyzed, and the disease ran a rapid and fatal course. Although cases which came within this definition were numerous, surgical literature contained few records of recovery after operative intervention; authorities were quoted to support this statement, and it was said that there had hitherto been no successful case in St. Bartholomew's or the Great Northern Central Hospitals. It was proposed to include in an appendix the successful cases which others had recorded. Hitherto, Mr. Lockwood had operated upon cases of diffuse septic peritonitis more because he was afraid of overlooking a mechanical obstruction than in the hope of curing the peritonitis. A case was described to illustrate the importance of intestinal paralysis and distention in causing the fatal ending. Stress was also laid upon exhaustion and collapse as factors. In his successful cases a systematic attempt was made to meet exhaustion and collapse by stimulating the patient temporarily before the operation with strychnine and brandy, by the systematic application of warmth during the operation, and by rapid and methodical operating; and by warmth, stimulants, and nutrient enemata afterward. The organization of the operation was described, and the treatment of the distended intestines alluded to. To empty them, the gas was drawn from each coil by puncturing it with a fine trocar and cannula; the feces were let out by an incision, which was afterward closed. The abdomen was afterward irrigated, and closed after the insertion of a drain. Two cases of diffuse septic peritonitis were described in which the treatment was successful. In the first there was a perforation of the ileum. The peritonitis was of not less than forty-eight hours' standing. In the second case the peritonitis had probably been in progress fifty-two hours. The abdomen was full of free gas, with the usual lymph and purulent fluid. The cause was thought to have been a septic inflammation of the left Fallopian tube. The patient was now convalescent, the operation having been performed more than five weeks ago. A third case was described, in which the peritonitis was diffuse but different in type. In this the recovery was mainly attributed to an accidental fecal fistula, which discharged and prevented distention and paralysis after the laparotomy.—*Med. Record.*

Intravenous Sublimate Injections in Syphilis.—Blaschko (*Berl. Klin. Woch.*) has treated a number of patients by this method introduced by Baccelli. He uses rather a stronger solution than Baccelli, namely, sublimat. 0.3, sodii chlor. 0.6, aq. destil. 100. The first injection consists of a quarter, the second of half a syringe (containing two cubic centimeters); later 1 or even 2 syringefuls are given daily. In a course of thirty to thirty-six injections only 1½ to 2 cgr. of sublimate are thus given. Lately the author has used even stronger solutions than the above. The treatment is usually only available for in-patients. It may not be possible in fat people whose veins are not visible. Clotting takes place if the needle pierces through the vein or passes by it, and then a hard, painful aseptic periphlebitis ensues. The needle should be very fine and sharp, and must be washed out with alcohol and kept in vaseline. The strictest cleanliness must be practiced. The author has never seen hemoglobinuria after this treatment, and only once a temporary albuminuria. Urine passed one hour afterward was always found to contain mercury. No mercurial depot is formed in the body, as occurs in some other methods of mercurial treatment. The author's cases were mostly of early syphilis. A therapeutic effect was always obtained if the treatment was continued long enough. The author has already observed four relapses. The advantages of the method are its painlessness (if the vein is entered), the small amount of mercury given, the exact dosage of the drug, all of which is utilized, and the absence of unpleasant results. It appears to be inferior to inunction and subcutaneous injection in its permanent effects. This mild treatment is suited to cases where it is desirable to avoid large quantities of mercury. Baccelli's method shows how little mercury suffices to cause the disappearance of syphilitic manifestations, and it also inaugurates the intravenous method of treatment.—*British Medical Journal.*

NOTES AND ITEMS

Medical Publishers will Meet.—The annual meeting of the American Medical Publishers Association will occur on May 6, convening in the parlors of the Eutaw House, Baltimore at 9:30 A M. An interesting program is being prepared, and every indication points to a large attendance. This organization has continued to grow from its inception, until now it embraces nearly one hundred of the best medical journals of the country, and it is to be hoped this number will be doubled at the Baltimore meeting.

Aids to Perscribing.—It is strange that those convenient aids to perscribing and dispensing, gelatin capsules, are often ignored. A moment of reflection will convince the most skeptical that the capsule is very easily dissolved—scarcely does it reach the stomach ere the lesser portion, which forms the cap, begins to swell and curl backward upon itself, when almost immediately, its releases the medicament in a form to be readily dissolved and assimilated.

The Resorcin Test.—The resorcin test for the detection and quantitative estimation of free Hydrochloric acid in the gastric juice, as prescribed by Julius Friedenwald, is as follows:

The clinical value of estimating the amount of free hydrochloric acid in the gastric fluid renders it import-

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ant that the simplest and most reliable tests should be better known. Gunzburg's phloroglucin-vanillin test, consisting of phloroglusin 2 0, vanillin 1.0. alchol absol. 30.0, is the one commonly used.

In 1888 Boas first pnblished the report of this reagent, consisting of resorcin resubl. 5.0. sacch. alb. 3 0, spiritus dilut. 100.0, and he claimed for in an accuracy equal to Gunzburg's test. Boas' reagent also reacts only to free hydrochloric acid, and never to organic acids. The reaction is carried out as follows:

A few drops of the solution are heated in a porcelain dish with an equal quantity of gastic filtrate to complete evaporation; a red mirror is produced when free hydrochloric acid is present. The accuracy of either test is about equal. Results sufficiently accurate for all practical purposes may be obtained with either, but the following advantages are claimed for the resorcin test:

1. Phloroglucin is quite unstable and frequently decomposes. The resorcin may be kept for years in a dark-colord bottle without undergoing decomposition or in any way losing its sensitiveness.

2. Resorcin can be had for a trifling expense, while phloroglucin-vanillin can only be purchased at a considerable cost.

Yet for some reason Boas' reagent has never gained the popularity it deserves.

The United States Pharmacopeia.—A pharmacopeia should represent the broad results of therapeutic observations and investigations accepted by, or at least acceptable to, the medical profession at large in the country for which the work is written. In general, therefore, it should nor introduce insufficiently tried new remedies or method, but should accept only those which have, by matured and careful study, been found worthy of recognition. An exception to this rule may occasionally be found admissible, when a new form of preparation is introduced to take the place of one which has been found unsatisfactory. On the other hand, it ought to contain all remedies which are used in legitimate practice, and which the physician openly and designedly uses to obtain definite results. At the present time it is impossible to open any medical periodical or text-book on therapeutics without constantly encountering the name of the newer synthetic chemical remedies, such as antipyrine, sulphonal, phenacetine, aristol, etc., and yet these are kept out of the United States Pparmacopeia. Up to the year of 1890 there was probably a sufficient excuse for this, because the permanency of many of these compounds was not yet fully assured, and the proprietary claims surrounding most of these substances were regarded as an ethical barrier against their recognition. It appears, however, that the views regarding the status of these remedies are gradually changing in favor of their future recognition. Most surely they should not be classed with proprietary nostruns, for in most cases their chemistry, mode of manufacture, constants of nature, reactions and tests are scientifically determined and known, and it is equally certain that they will be employed by the medical profession, whether they are recognized by the pharmacopeia or not. Their multiplication, aside from others causes, will gradually diminish the number of many of the more old-fashioned and, to a large extent, empirical preparations now official. Eventually the time might arrive when the majority of the energetic and efficient remedies used by the physician would have to be looked for in works of reference outside of the pharmacopeia. It is to be hoped that this matter will be well considered and that the present restrictions will be removed at the next convention.

The question has often been raised, Why did the Committee of Revision not introduce a table of doses in the pharmacopeia? And it has been answered at various times, more or less completely, sometimes at great length. This may be done more briefly as follows: Doses of medicines can and should be determined on and authorized only by medical men, who are competent to judge of their effects. This work cannot be undertaken by pharmacists. As long as the medical colleges, societies, and associations do not authorize their delegate to the convention, and their representatives, if they have any, in the Committee of Revision, to vote for the insertion of doses, none of them would feel justified in consenting to it, as there is a deep-seated impression abroad that the establishment of an official table of doses would place a dangerous weapon into the hands of unscrupulous persons, and might involve many physicians in suits for damages. All efforts, therefore, in favor of of the introduction of doses into the pharmacopeia should be directed to the medical profession, and no blame for their omission should be attached to the Committee of Revision, which is powerless in the matter. It is suggested that a proposition be made to the medical profession, probably best to its representative body, the American Medical Association, to sanction a table of doses, prepared by a committee of therapeutic experts, printed in the pharmacopeia, with the distinct announcement that the doses given are the average ones to produce the ordinary expected effects, but that every physician has the right to use larger or smaller doses whenever such may, in his judgment, be required.—Dr. Charles Rice, in *Pharmaceutical Era.*

CULVER, P. O. Tex., Novembtr 24, 1892.

DR. W. SCOTT MARSHALL, Centralia, Ill.—

I have received the Buggy-Case Saddle Bags, which I am very much pleased with. They are just what I wanted. Everything came safe without a scratch.

DR. J. W. BENTON.

P. S.—I received another make of case, the movable case. from —— O. K., but have no room for it. B.

YOU will notice an advertisement in the back part of this journal of Dr. J. H. McIntyre, of St. Louis, Mo., which is very pleasing to the eye, and you will find the Doctor very pleasant to converse with. He will be pleased to go any distance for consulting cases or performing operations in his special line of diseases of women.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Notes From Country Surgical Practice.—Foreign Body in Orbit; Strangulated Femoral Hernia; Varicocele; Enchondroma of Parotid; Enlarged Graafian Cyst.

BY GILBERT G. COTTAM, M.D., ROCK RAPIDS, IOWA.

CASE I.—FOREIGN BODY IN ORBIT.

That the soft tissues of the orbit, surrounding the eyeball, are tolerant of much injury without permanent ill-effect must be acknowledged. To two conditions can this be attributed:

1. The elasticity of the parts, and
2. Their abundant vascularity.

The following case is corroborative:

Geo. H., aged 11, while playing one evening, fell face downwards in a field where some time previously the weeds had been mown. The stump of one of these entered the right orbit and being dry and withered, broke off short, leaving about an inch protruding. This happened about 7 P.M. The parents immediately tried to remove the fragment and took away, as they supposed, the entire piece. The boy suffered extreme agony all night, but this the parents supposed to be the natural result of the injury, and being six miles from town, did not send for me until the following day. I arrived at 9 A.M. and found a pitiable state of affairs. So intense was the pain that not even a superficial examination could be made. Chloroform was administered, preparation having been made for an operation should one be necessary. Under narcosis it was found that the fragment in entering had torn out a triangular piece of the lower lid. Passing under the globe and slightly outwards it had made a rent about 1.5 cm. long in the conjunctiva. There was intense chemosis and a free purulent discharge. Inserting a speculum and rotating the eyeball upwards with fixation forceps it was readily seen that in the orbital fat a large foreign body lay imbedded. This being disintegrated, the larger pieces were removed *seriatim*, numbering in all thirteen. Placed together they formed a portion of the stem of a weed .6 cm. in diameter and 3 cm. long. Then the smaller pieces were removed partly with forceps and partly by washing out the cavity with bichloride solution 1–1000. (This may seem rather strong for the eye, but extreme measures were considered justifiable in view of infection having taken place). The operation from beginning to end consumed one hour. It might have been done in less time had I not been compelled to officiate as anesthetist and operator combined, being without skilled assistance.

The eyeball had almost escaped injury, a slight laceration of the sclera being the only trauma visible. Subsequent ophthalmoscopic examination showed two small retinal hemorrhages, which, however, speedily became absorbed.

Recovery was uneventful under the use of moist bichloride compresses and the internal administration of a calomel purge. I expected symblepharon to form, but in this was mistaken. Partial ptosis, scarcely noticeable, is the only relic of the injury, the motility of the eyeball being as perfect as ever.

CASE II.—STRANGULATED FEMORAL ENTERO-EPIPLOCELE.

Jacob S., aged 69, a German farmer. Three years ago this patient noticed a swelling about the size of a pea in the right groin. It caused no inconvenience, and he paid little attention to it. Recently it suddenly increased to the size of an English walnut, accompanied by pain and vomiting. He endured this for thirty-six hours before summoning medical help, and when I saw him he presented all the classical symptoms of strangulated hernia—feculent vomiting, constipation, local pain, and, of course, the tumor. The latter was dull on percussion.

Moderate taxis failed. Obtaining consent for counsel I immediately sent for Dr. G. C. Wallace and Dr. W. R. Bates, of Rock Rapids. Both concurred in the diagnosis.

We decided to make every preparation for operation, chloroform the patient and then make another gentle attempt at reduction, with the muscles relaxed by the anesthetic. This was done, without success, so, the parts having been made aseptic in the usual manner, I made an oblique incision down to the sac. The latter was opened, and a loop of blackened intestine, covered

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with adherent omentum, exposed. Breaking up all adhesions, which were numerous both between omentum and intestine, and omentum and sac, the hernia was finally reduced. After douching freely with hot water, both intestine and omentum regained their normal appearance and were considered in fit condition to be returned to the abdomen. A radical cure was attempted by a running suture invaginating the cut edges of the sac, and the subsequent history of the case shows this to have been effectual. Then the external wound was closed with interrupted silk stitches, without drainage

A simple dry dressing was applied (aristol, bichloride gauze and cotton) and the patient put to bed, surrounded by hot bottles. Strychniæ sulph, gr. $^1/_{30}$ was given hypodermatically. The operation had been very rapid, lasting but a few minutes, and there was no resultant shock, thanks to the use of hot bichloride towels during the operation and minimum exposure of the parts.

The vomiting and other bad symptoms subsided soon after the effects of the anesthetic had passed away. There were two normal evacuations of the bowels on the following day.

The stitches were removed on the eighth day, perfect primary union having taken place. I insisted on the patient staying in bed three weeks, much against his will, for he felt entirely well after the first twenty-four hours. He now wears a specially constructed truss, as a precautionary measure, for the nature of his work constantly tends to throw a strain on the cicatrix.

The unusual features of this case are:

1. The patient's advanced age.
2. The nature of the hernia, and
3. The peculiar surroundings (a country farm house seven miles from town). In this connection the question naturally suggests itself, "Is asepsis always possible in the country?" I say, emphatically, "Yes."

Having operated under all conditions and with the most diverse appliances, from the glass topped table of the modern hospital to the carpenter's bench and kitchen table of the average farm house I feel impelled to confess that the results most nearly approaching to the ideal have been obtained with the crudest surroundings.

Given a stove, and water to boil my instruments and silk with, reliable bichloride gauze, bichloride tablets, a few clean towels, soap and razor, and plenty of boiling water, and I will operate on emergency in a country farm house with as complete confidence against sepsis as if in the fumigated laparotomy room of an up to-date hospital.

I do not say this to encourage indiscriminate surgery in the country, but simply to insist that it is possible, provided that he has had the proper preparatory training, for a country surgeon to save a life when surgical means alone are indicated, regardless of seemingly disadvantageous circumstances. Of course, the operation will be a failure if unskillfully performed, no matter how rigid the asepsis, or how resistant the patient's constitution.

Case III.—Varicocele.

Walter A., aged 16, had observed an enlargement of the left testicle for several years. He had worn a suspensory bandage, but without relief from a constant dragging pain along the course of the spermatic cord.

Examination showed the existence of a well-marked varicocele.

After the parts were shaved and sterilized a short incision was made, and the testicle with its adherent growth, eventrated. Cutting through the fascia the plexus was exposed and ligatures applied to both extremities, including all but two or three of the veins implicated. The intervening portion was then excised and the cut ends brought together, the two ligatures being tied so as to hold the raw surfaces in apposition. The ligatures were finally cut short and the testicle returned to the scrotum. A continuous suture (silk) closed the external wound which was then painted with aristol-collodion.

Primary union resulted, and nothing now remains of the original lesion save a small indurated nodule. All pain has entirely disappeared.

Case IV.—Enchondroma of the Parotid Gland.

In this instance, the patient had observed a swelling for some years in front of, and somewhat below, the left ear. It had every appearance of an ordinary sebaceous cyst—freely movable to the touch and apparently superficial.

I undertook to remove it under cocaine but soon found that it extended more deeply than I had supposed. It was firmly attached to the skin and in attempting to separate the two I accidentally punctured the sac, permitting the escape of about half a teaspoonful of hard, ivory-like flakes. On exploring the cavity of the sac, it was found to dip down behind the coronoid process of the jaw. With forceps and scissors I removed as much of the growth as possible without an extensive dissection and sutured the external wound. Iodine was subsequently injected into the cavity and when last seen the enlargement was scarcely perceptible.

Case V.—Enlarged Graafian Cyst.

Fanny T., aged 37. This woman suffered from constant sharp pain in the left side, worse during menstruation, and accompanied by an unusually severe train of reflex neuroses. She had been treated locally by all palliative means without permanent relief.

Bimanual examination showed tenseness in the left lateral fornix. The ovary could not be outlined, but a soft, yielding mass was easily detected in that region.

At her earnest request an operation was promised. This being premeditated, more extensive preparations for securing surgical cleanliness were made than in Case II. A well-lighted room in the patient's own house being chosen, all pictures, ornaments, etc., were removed, and the ceilings, walls and floor thoroughly dusted and cleansed. Our operating table was a Clark

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gynecological chair in full extension, covered with a clean rubber sheet. Just before the hour set for the operation the floor was sprinkled with water. The room temperature was maintained at 100° F. All instruments, except those with cutting edges, were boiled twenty minutes in soda solution. Those excepted were immersed in alcohol. Hot bichloride towels were in readiness.

The patient had been suitably dieted and on the morning of operation the abdominal cuticle was sterilized.

The usual mesial incision was made and a thin walled cyst of the left ovary discovered. A strong, silk ligature was thrown around the ovary and tube and excision performed. There being no hemorrhage the stump was replaced in the abdomen. A running catgut suture was applied to the peritoneum and interrupted silk stitches to the skin muscles and fasciæ.

Prompt recovery with amelioration of all neurotic symptoms ensued. One year has elapsed since the operation, and there is no evidence, as yet, of ventral hernia.

Enlarged Graafian cysts as a pathological entity passed unnoticed until described by Kelly ("Syst. Pract. Therap." ed. Hare, vol. iii, p. 827) who notes that "the persistent pain and disturbance of the general health are remarkably out of proportion to the apparently simple nature of the affection. Operation is the only method of affording relief."

Earache.—Its Causes and Treatment.

BY J. ELLIS JENNINGS, M.D.,

Fellow of the British Laryngological and Rhinological Association; One of the Eye and Ear Surgeons to the St. Louis Mullanphy Hospital, St. Louis, Mo.

Read before the St. Louis Medical Society, February 23, 1895.

GENTLEMEN—My purpose to night is, not to read a scientific paper, but to call attention to the homely subject of "earache," its causes and treatment. I therefore ask your indulgence in thus rudely diverting your minds from the study of grave pathological changes to a disease which is regarded by many as a trivial affection and not worthy of serious consideration

The family physician, who is such a comfort and aid in times of grave disease, is apt to stand helpless as soon as the word earache is mentioned. Sad experience has taught the laity this fact, and they suffer on for days without relief, or apply some specific which has been handed down from generation to generation, but which often does more harm than good. But, gentlemen, earache is not a trifling affection, it is attended with great suffering and oftimes intolerable pain, and if not properly handled may go on to suppuration, perforation of the tympanic membrane, progressive deafness, necrosis of the ossicles, extension of the inflammatory process to the mastoid cells, the brain, with possibly death as a finale.

Even in ancient times the subject of earache occupied the attention of physicians, as is evinced by the curious methods of treatment handed down to us. A favorite remedy was an instillation of oil in which three or four cock-roaches or an African snail were cooked, while a piece of henbane in oil of roses or woman's milk was afterwards added. Other remedies were warmed wolf's milk or pepper mixed with old oil; warm fat of geese and hens; urine of pigs; the semen of a boar; the excrement of pigeons; and the ashes of horses' dung. Among the remedies in common use at the present day, and which do harm by reason of their stimulating qualities, are Haarlem oil, molasses, roasted onions, cologne water, ether, camphorated oil, poultices, etc. When we consider that the earache which is so common in childhood may be followed by suppuration and progressive deafness, without counting the pain and misery, it is evident that its proper treatment is a subject of practical importance, and one in which every physician should be interested.

If, then, a patient comes to us complaining of earache, do not dismiss him with the conforting assurance that it will be better in a day or two, or at most order a little oil dropped into the ear night and morning, but let us examine the case carefully and try to find the situation and cause of the trouble. The first question to decide is its location.

1. Is it in the meatus?
2. Is it in the middle ear?
3. Is the pain of a reflex nature due to a neuralgia or a decayed tooth?

To decide the first question we must examine the meatus, but before we begin, let us ask ourselves what possible causes of pain could be located in the external ear. It might be a diffuse inflammation of the lining membrane; a circumscribed inflammation such as a furuncle or a boil; or a foreign body, such as a pea, an insect or a plug of cerumen pressing against the drum membrane. Keeping the possibilities in mind, we proceed to examine the external meatus. For this purpose we need no expensive or elaborate instruments, but at most a set of ear specula and a mirror, which should be in the surgery of every well equipped physician. But first we can learn much as to the condition of the external ear by palpation and inspection. By inspection we note any signs of inflammation, eczema or furuncle. By palpation we can often determine the seat of inflammation. Thus, tenderness on pressure of the tragus usually indicates inflammation of the meatus; tenderness on deep pressure below the auricle denotes inflammation of the middle ear; and tenderness over the mastoid process indicates an extension of the disease to the mastoid cells. After learning as much as possible by inspection and palpation, we proceed to examine the deeper portions of the meatus by means of a speculum and mirror. The delicate insertion of the speculum and the proper illumination of the canal is a procedure, seemingly very

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simple, but in reality the result of considerable practice. Many surgeons prefer artificial illumination by means of a bull's eye lens in front of an Argan burner, but reflected daylight, which is easily adapted to the patient's ear and is not modified by any slight movement of the head, is all that can be desired. Let us now study for a moment the different conditions of the external auditory canal which are apt to cause an earache.

I. Diffuse Inflammation of the Meatus.—The patient complains of an itching, a sense of fullness, with tenderness on pressure over the tragus, and pain of varying amount. The walls of the meatus, particularly the osseus portion, are swollen, and generally the seat of suppuration sooner or later. The tympanic membrane may or may not show evidences of inflammation. The cause of diffuse inflammation is irritation of the ear by means of hair pins, ear picks, or stimulating drops, such as cologne water, camphorated oil, ether, etc. Surf bathing and cold draughts of air, while sometimes causing inflammation of the meatus, are much more likely to set up an acute catarrh of the middle ear.

II. Circumscribed Inflammation of the Meatus, or Furunculosis.—This is a very common and painful affection. The amount of pain is largely dependent upon the situation of the boil. If it is superficial there is little pain, but if deep seated, in the rigid tissues, the pain is extreme. An examination of the meatus will reveal one or more small swellings, usually situated on the anterior wall of the canal at a point near the tragus. The cause of furunculosis is, according to Dr. Loewenberg, of Paris, a minute organism which he found in the contents of the boil. The disease is most frequently met with in anemic patients and is prone to return at short intervals. Frequently the physician will find, in cases of diffuse inflammation of the meatus or furunculosis, that the canal is almost blocked by the swollen and exquisitively painful tissue. It will therefore be unwise to attempt a thorough exploration of the meatus until we have reduced the swelling and pain by appropriate treatment.

III. Foreign Bodies.—Occasionally children at play push a foreign body, such as a small pebble, pea, bean, etc., into the meatus. As such it does little harm until the solicitude of the parents or friends causes efforts to be made for its extraction, when it is usually pushed down against the drum membrane, if not further, and is then apt to be a source of serious mischief. Sometimes, more occasionally in the woods or fields, an insect finds its way into the meatus and is the cause of agonizing pain.

1. Middle Ear.—If the physician finds nothing in the external meatus sufficient to account for the earache he should next direct his attention to the middle ear. Now, what is the most frequent cause of earache in this region? The answer comes with no uncertain sound—acute catarrh. Acute catarrh of the middle ear is the usual cause of earache so frequently noticed in infancy and childhood. The pain is intense, often coming on without warning at night and leaping to its height almost at a bound. With the pain are usually associated noises, stiffness of the ear, sore throat and febrile symptoms of more or less severity.

In children the diagnosis is sometimes difficult, because the little sufferer is unable to tell us the location of the pain. It is usually possible, however, by watching the child to locate the pain in the region of the head. Excluding brain affections, we must seek for the cause of the distressing symptoms in the teeth or ears. Many practitioners make the mistake of confining their attention to the teeth and are satisfied with the diagnosis of difficult dentition in cases where the true source of irritation is located in the eyes. If we examine the ear in a case of acute middle ear catarrh, we find that the pearly white color of the tympanic membrane is now of a pinkish hue, or perhaps the injection is localized along the handle of the malleus. In severe cases this latter landmark is lost to view in the dusky red and swollen tissue, which then more resembles the inner wall of the middle ear than the tympanic membrane. The causes of middle ear catarrh are numerous. Getting the feet wet, catching cold, sitting in a draught of cold air, surf bathing, etc. It is also often one of the complications of small-pox, measles, scarlet fever, pneumonia, bronchitis, cerebro-spinal meningitis, etc. Whatever may be the cause, the naso-pharynx is almost invariably first involved by the inflammatory process, which then travels along the Eustachian tube to the middle ear.

2. Pain of a Reflex Nature.—Many patients come to us complaining of an earache for which, after a careful examination, we can find no cause in the ear or naso-pharynx. In these cases we should always make it a point to examine into the condition of the teeth. A decayed tooth or an old stump may set up an irritation which is referred by the patient to the ear, and treatment is unavailing until the offending molar is extracted.

Treatment.

Diffuse Inflammation of the Meatus.—This may often be cut short by applying one or more leeches to the tragus. The leeches should not be placed behind the ear, but on the tragus, which is in more direct communication with the blood supply of the meatus. This local blood letting depletes the engorged vessels and relieves pain. Leeches do not, however, relieve pain as certainly in this affection as they do in acute middle ear catarrh. We then resort to another method of blood letting by scarifying the swollen and sensitive walls of the cartilaginous meatus. For this purpose a tenotomy knife is used, and the incisions are free and from three-quarters to one inch in length. After the reduction of tension a hot water douche is very grateful to the patient. What is wanted is a continuous stream of water, as hot as can be borne, playing over the inflamed tissue. A fountain syringe, or an ordinary pitcher and a piece of rubber tubing, best meet the above requirements. The vessels containing the hot water should be placed a little above the patient's head, so that there is a gentle,

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even flow in and out of the meatus. This method of douching the ear should be explained to the family, for if left to their own resources they will use the ordinary piston syringe and drive the water against the tympanic membrane with considerable force. Sometimes it may be necessary to use a flax seed poultice, and as it, if improperly used, does harm by relaxing the tissues and causing the formation of granulations, a few words on the subject are advisable. Never use a poultice until you have exhausted all other means at your disposal If you decide to try the effect of a poultice, it should be encased in cloth and of such a size that it just covers the meatus. After a few hours, or as soon as the pain ceases, it should be discontinued. If, in spite of your efforts, a discharge makes its appearance, much good may be accomplished by keeping the ear clean.

If a *furuncle* or *boil* is the cause of the earache an early incision, even before pus has formed, is indicated and usually gives immediate relief. Care should be taken to make a free incision, cutting through the tense, inflamed, cartilaginous tissue. After the pus and blood have been evacuated, hot applications, or a small poultice in the meatus, to be removed as soon as the pain has subsided, may be of service. If the pain is severe, the following instillations of lead and morphia is recommended:

℞ Liq. plumbi.,
Liq. morph., - - - - - aa ℥j.
Aquæ, - - - - - - ℥x.
M. ft. inj.
Sig. ℥ss to a wineglassful of warm water.

If the patient is restless at night and unable to sleep, it may be advisable to administer a narcotic, such as a combination containing sulphate of morphia, chloral hydrate and sodium bromide, to be taken at bed time and repeated every two hours as necessary. After the acute symptoms have subsided, in order to prevent the return of the disease, the cartilaginous portion of the meatus should be painted, night and morning, with the following ointment:

℞ Ung. hydrarg. nit., - - - ℥j.
Vaselini,
Ol. amygd., - - - - aa ℥j.
M.

As the general health is apt to be impaired, internal treatment is indicated. Calcium sulphide may be given in pill form with the object of preventing pus formation.

Foreign Bodies.—If an insect finds its way into the meatus no time should be lost in applying the remedy. The best means to get rid of it is to pour warm water into the ear, when the insect is drowned or is forced to run out and seek other quarters.

If a small pebble, pea, or other hard substance becomes lodged in the meatus, none but a skilled hand should attempt its removal by instruments. The great danger is that it will be forced against the drum head, or through it into the tympanic cavity. The temptation to use an instrument in an endeavor to remove the foreign body is almost irresistible. In this way irreparable injury is done when we have at our disposal a remedy which is both safe and sure. It might seem superfluous to advise the physician to be certain of the presence of a foreign body before undertaking its removal, but cases are on record where operations have been done for the removal of a foreign body when none was present in the ear. If, after a careful examination, we locate a foreign body in the external meatus, the first thing to be done is to attempt its removal by syringing out the ear with warm water. In ninety-nine cases out of a hundred this procedure will be successful and that, too, without injury to the ear. The water should be directed, not against the foreign body, but along the walls of the canal in an endeavor to get behind the object and force it out. If syringing fails after several trials, and it seldom does, then only are we justified in attempting its removal by means of instruments.

In *acute catarrh of the middle ear*, which is the most common cause of earache, antiphlogistic treatment is indicated. Local bleeding, by means of leeches applied to the tragus, often has a magical effect in relieving pain. In ordering leeches, always inform the patient where they are to be applied. Afterwards, the bleeding should be encouraged for an hour or so by means of warm compresses. Next to leeches, a continuous stream of hot water gives most relief, and, indeed, in many cases is all that is required. Warm vapor, as that from a steam nebulizer, the smoke from a cigar, breathing slowly into the meatus, are all grateful to the patient and should be used as occasion demands. At night the ear should be kept warm by means of a dressing of cotton and a hot water bag or a hot brick placed under the pillow. If suppuration has begun in the middle ear, and a collection of pus causes a bulging of the tympanic membrane, paracentesis should be performed at once. This little operation, causing but slight pain, is often followed by the happiest results. If an instillation is desired, the lead and morphia drops mentioned above can be used, or the following:

℞ Tinct. opii,
Tinct. belladonnæ, - - - aa ℥j.
Aquæ, - - - - - q. s., ℥j.
M.
Sig. Four or five drops to be used every few hours.

As acute catarrh of the middle ear is an extension of inflammation along the Eustachian tube from the naso-pharynx, this region should not be neglected. The parts may be sprayed from time to time with Dobell's solution:

℞ Acidi carbolici liq., - - ♏xxx.
Sodii biborati,
Sodii bicarbonati, - - - aa ℥j.
Glycerini, - - - - ℥iijss.
Aquæ, - - - - q. s., ad ℥iv.
M.

An application of a four per cent solution of cocaine every two or three hours is very useful in relieving the congestion of the naso-pharynx. This remedy should be applied by the surgeon, and the best method is to

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cover the end of a cotton carrier with a thin film of cotton and having dried the membrane, it is freely covered with the solution. An external application to the throat of hot compresses will assist materially in the cure.

2942 Washington Ave.

Cramp and Angina Pectoris.—For more than a century following Heberden, angina pectoris has been considered by a large part, if not the majority, of the profession, as caused by a spasm of the cardiac muscle analogous to those often met in the limbs. There have been offered a number of reasons, however, why such a spasm is incomplete to account for all the phenomena of an attack of angina. Dr. F. P. Weber, in a recent communication, speaks of the ordinary angina attack (following Huchard, "Maladies du Ceur," 2d Ed, Paris, 1893) as analogous to the condition described as "claudication intermittente" by Charcot and others. (*Am. Jour. Med. Sci.*). This latter condition was originally noted in horses, consisting of a suddden loss of power, accompanied with pain, anesthesia of the limb affected, with sometimes rigidity. Presently this wears off, and the horse proceeds, only to have another and another attack if urged too rapidly. It has been found in these animals, that there has been a closure of some form of the vessels supplying the affected part. A similar condition has been described in man. It is believed that this lack of power is due to insufficiency of the blood-current, and that the pain is also the result of this ischemia. Occasionally, probably from the insufficiency of the restricted blood-supply to remove useless and irritative waste products, a cramp occurs; and this may be associated with the loss of power, pain, etc. Thus, after or in great exertions the blood-supply is insufficient to keep up the tone of the exercised muscles, and a temporary uselessness occurs. Often rigidity also occurs, but not necessarily. Sometimes the cramps occur without being preceded by any marked diminution of power, etc. So in disease of the vessels resulting in gangrene, pains are sometimes felt from the lack of nutrition to the sensory nerve-endings; or even lack of power may occur, as premonitory of the oncoming gangrene. Thus it is belived that the ordinary angina, in which a loose, flaccid pulse is met, is really an instance of claudication due to the absence of sufficient blood, caused by coronary closure; the cramps which sometimes occur generally leading to a fatal termination, and the heart stopping in systole—the non-fatal attacks being unaccompanied by cramp, and only showing a lowered muscular power of the heart, together with pain.—*Med. Record.*

Amenorrhea.—Chlorosis.

℞ Gude's Pepto-Mangan,
Dioviburnia, - - - - - - aa ℥iij.
M.
Sig. Half a tablespoonful three times a day.

EDITORIALS

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The Prospects of the Revival of the Social Evil Law.

Proper notions of public hygiene have at last dawned upon that class of influential fellow citizens who, thus far, have enjoyed the unenviable reputation of stubbornly balking any progressive and enlightened development of that branch of medicine, whenever their religious or moral tenets happened to be in conflict with the framing of laws looking towards reform.

One of the most difficult problems, upon whose proper solution depends the health of the present and of coming generations, is the question of how to deal with prostitution. Medical men have long held, that there are no laws and no religions strong enough to suppress it. The customary method in religious circles of dealing with this subject was to pronounce the anathema against it and turn up the eyes in holy horror and the noses in supreme disgust.

St. Louis had the distinction about twenty-five years ago, of having one of the best laws for the regulation of the social evil, that ever was framed in any country. Sham modesty and hypocrisy on the part of the clergy assisted by a number of vociferous and crack-brained females succeeded in the revocation of the salutary law, after it had been in good running order for three years. The cry of "God and morality" dealt it the death-blow.

Since then the clergy, or at least a part of it, and

some female reformers have come to the conclusion, that an evil which has existed for many thousand years, and which seems to be indissolubly connected with civilization, cannot be prayed away, nor decreed out of existence even, by Drakonian laws.

Foremost among the true reformers, who have resolved to tackle the evil with the right means, is Dr. W. W. Boyd, a Baptist minister. He is of the opinion that the evil cannot be suppressed, but that by proper regulation it can be restricted. If the gentlemen succeed in having a law passed, compelling the registration, supervision and examination of the prostitutes at fixed intervals of the inmates of houses of prostitution, they may be assured, that they will by this practical step save the souls and bodies of more women and men, than they could by exhortation at their churches.

The introduction and enactment of the old social evil law drove almost all the advertising clap-doctors out of the city of St. Louis. Their occupation was gone. The re-inforcement of this or the enactment of a new law would have the same salutary effect to day.

The medical profession will certainly welcome such co-workers as Dr. Boyd in the good work of true and enlightened humanitarianism.

Auto-Infection From the Bowel.

The cause of the so called spontaneous suppurations have always been a puzzle to medical men and it is only within the last decade that their origin appears to become more intelligible, although the knowledge of their production is still far from being exact. That a furuncle, or any other inflammatory focus may be the starting point of an abscess far removed from the initial, and often insignificant, inflammation has been demonstrated by well-known observers and it is plain that such a point of entrance of the infectious material is easily overlooked and often even impossible to determine as it may have escaped the patients' notice and entirely disappeared at the time of examination by a physician.

The present trend of investigation with reference to determining the cause of spontaneous suppurations seems to be based upon the supposition that the absorption of infective material from the bowel is the cause of many otherwise unexplainable metastatic inflammations and it is particularly the bacterium coli whose absorption into the circulation and dissemination throughout the tissues of the body is made responsible for these metastatic foci. The strumitis following typhoid fever and other intestinal affections was, years ago, suspected by Kocher and others to be due to an absorption of bacteria from the bowel, in fact, such bacteria have been demonstrated in the strumitis, and according to Brunner, this absorption of bacteria may even occur from the healthy bowel. It has been shown that bacteria may pass through the intestinal wall and infect the peritoneum when only slight pathological changes are present in the bowel and, in case of the presence of conditions favorable to the development of an inflammatory process, as, for instance, a blood-extravasation, a peritonitis may be the result. Ordinarily the peritoneum rapidly absorbs the bacteria, which are then carried by the circulation to all parts of the body. Well-known observers now claim that some forms of purulent nephritis, pyelitis and cystitis are to be explained by the absorption of bacteria from the bowel, while formerly all such suppurations were attributed to catheterization. Posner and Lewin have lately made experiments having a bearing upon this subject, by tying the rectum of rabbits, after which they were able to demonstrate the bacterium coli in the peritoneum, heart's blood, kidneys and urine. These observers have also succeeded in proving that the bacteria do not directly pass into the bladder and thence into the kidney by tying one ureter and showing that the bacterium coli was also found in the corresponding kidney after clamping the rectum. Also upon the injection of the bacillus prodigiosus, which had been selected for this purpose on account of its characteristic color production, this bacillus was found in all the organs of the body.

Although it must be admitted that there may be other sources of so-called spontaneous suppurations, the probability that some of them occur in consequence of the absorption of infectious material from the bowel is, with our present information on the subject, highly probable and many otherwise inexplainable cases of suppuration become comprehensible by this process.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, February 16, 1895; the President, F D. MOONEY, M.D., in the Chair.

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The discussion of Dr. Hulbert's case of "Cholecystectomy," was taken up as a special order of business.

DR. GEORGE F. HULBERT said that there had been very few cases of cholecystectomy presented to this Society, although there are many points in connection with the subject that are in a state of uncertainty, and which might be discussed with profit.

The first question asked, was: Is cholecystectomy ever a justifiable operation? By that is meant, of course, the removal of the entire gall bladder.

The opinion of most surgeons would lead us to believe that the gall-bladder is not essential to the health of the patient; and the arrangement of the ducts and the gall bladder itself would lead us to conclude that it is of very little service, except at the time of a tempor-

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ary occlusion of the ducts, which is liable to occur from tumefaction or intestinal changes.

In deciding the question of operation, we are not dealing with theories, but must meet conditions. We can not afford to overlook the interests of our patient, but when we are called upon to correct existing conditions, these interests become of secondary importance, with reference to the organ involved, particularly where that organ is not essential in the human economy.

Where a permanent obstruction exists to the flow of bile into the intestine, the secretions become changed in character and are dammed back into the liver. This pressure in the bile channels results in a functional paresis, as far as the production of bile is concerned, and a consequent atrophy of the bladder, a diminution in the lumen of the ducts, and an inflammation, or tendency to suppuration and the formation of abcesses, in the gall bladder. If the inflammation does not assume an infectious character, that portion of the liver involved will atrophy. Where the cystic duct alone is obstructed, and there is no flow of bile into the bladder or from the bladder into the intestine, the organ is, manifestly of no use to the economy and should be removed, especially where it renders the patient an invalid, and where it constitutes a focus for the development of septic troubles.

While there never was a history of typical hepatic colic in the case reported, or any other symptoms to call attention to the condition found, the patient was an invalid, she had no use of her gall-bladder, and its removal was therefore justifiable. Langenbeck, early in his work, and one or two other surgeons, advocated removal of the gall-bladder for diseased conditions.

The main objection urged against the operation, is, that by so doing we remove all possible chance of establishing an anastomosis between the bladder and intestine at some subsequent period. It is claimed that where gall-stones have once formed, they are liable to occur again; and, in case they should become lodged in the common duct and occlude that channel, we are debarred from creating a by path for the flow of bile into the intestine. Speaker considered the objection farfetched as the secondary formation of gall stones is only problematical, and then lodgment in the common duct, in a current of bile, not probable. In total occlusion of the common duct we have, not only an absence of bile in the intestine, but a mechanical influence upon the bile ducts and capillaries.

Surgeons formerly advocated—and Marion-Sims is probably responsible for the suggestion—the suturing of the gall-bladder to the abdominal wall and the establishment of a biliary fistula, trusting to Nature to relieve the obstruction. The results of such procedures are very doubtful, and a secondary operation may be required to close the biliary fistula, to remove what would otherwise be a permanent disability; or, in case of a failure to relieve the obstruction, to establish an anastomosis with the intestine. At any rate, it can not be considered good surgery; it is work only half done. The nature of the obstruction should be accurately determined, and its removal accomplished at once. This may be done by needling, crushing the stone with padded forceps—as suggested by Tait—or by forcing the stone by digital pressure either into the intestine or back into the gall-bladder. Where this can not be done, the most rational method seems to be the incision into the common duct, removal of the obstruction through the incision, and suturing the walls of the duct. Speaker had found the records of three operations of this nature done in the past two years, two of which were successful. Where the obstruction can not be relieved on account of existing surrounding conditions, or where there is doubt as to the relief being permanent, it would seem that the only proper procedure is an anastomosis of the gall bladder to the most available portion of the intestinal tract; manifestly, the upper portion of the small intestine being the preferable site.

The same reasoning would apply to obstructions of the hepatic duct, because here we have the same influence brought to bear on the bile capillaries, and a condition of cholemia gradually established. Here, in occlusion, the removal by incision and subsequent closure by sutures is certainly imperative, where we can not succeed by the other means suggested. The problems presented in obstruction of the hepatic ducts are fortunately rare, relatively to those of the cystic and common ducts, but when present may, and usually do, demand a skill and ingenuity possessed by few.

The systemic condition, known as cholemia, which results from the long continued absorption of bile, should be carefully weighed in determining the time of operation in these cases. In looking over the literature, we are struck with the high rate of mortality accompanying operations on cholemic subjects. The organism seems to have lost the power of repair in these cases. Patients have died in from 24 to 72 hours after the operation, when the process of repair had not even been initiated. Secondary hemorrhage has also been considered the cause of fatal results in some casses. It is liable to occur when there are extensive adhesions, or where we cut too close to the liver tissue, and is unquestionably due to the persistent intoxication of the system with the bile constitutents.

The last question asked was: What was the cause of death in this particular case?

Sepsis has been safely excluded by the post-mortem and microscopical examinations. This fact is a comfort to the operator, as he should have considered himself more or less responsible for the result.

The presence of chronic interstitial nephritis was clearly demonstrated by the microscopical examination made by Dr. Summa. It was not suspected at the time of operation, however, as the patient had been under observation for 18 months, and no symptoms were detected which would indicate the trouble. Repeated chemical examination of the urine failed to reveal the presence of albumen or abnormal variation in specific gravity or reaction.

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That the condition following the operation and preceding death a few days was due to uremia can not be questioned in the light of the symptoms presented. The pulse was hard and wiry, and while the number of beats continued normal—being from 70 to 80 until the day before death—its volume and tension never reached the normal. This condition of the pulse after laparotomy should always be looked upon with suspicion.

The nausea and vomiting might have been due to the effects of chloroform in the early history of the case, but it was undoubtedly due to uremic influence later on. In spite of all the measures instituted for its relief, the vomiting was of that persistent, uninterrupted, projectile character which should always excite our suspicion of impending danger. Vomiting due to the influence of chloroform might continue 36 or 48 hours, but there should be occasional periods of rest, or an amelioration when the proper remedies are applied.

Another point in support of a diagnosis of uremia, was the strong urinary odor of the salivary secretions. The odor was at first thought to be due to a saturation of the bed clothes, or an unclean skin of the patient, but these factors were eliminated by gathering some saliva on a handkerchief and smelling of it in another room.

Speaker thought that the immediate cause of death in this case was uremia, and predisposing cause was cardiac debility.

Dr. Hugo Summa called attention to the difference between cholemia and intoxication of the system by bile. They are not identical. It is a fact that where jaundice exists for a length of time, we have all the constituents of the bile in the blood; but, strangely, the amount of bile acids, the only poisonous material of bile, are so much diminished that their presence does no harm to the system.

Cholemia is an unfortunate term; it means bile in the blood, while it has, strictly speaking, nothing to do with the bile constituents in the blood. It is an intoxication of the system by the cholesterin of the liver, as well as that which may occur in a case of persistent jaundice. But it may develop without jaundice; so that cholemia should not be confounded with jaundice.

Dr. Robert Funkhouser would consider the step a second time before removing the gall bladder in its entirety, except in two instances; first, where the walls of the bladder have become thin and shrunken so that they can no longer be stitched to the abdominal wall; and secondly, where a long continued suppuration has rendered them friable, so that suturing material no longer finds a sufficiently strong hold. We know that where we have removed stones from the bladder, additional ones will often be passed two or three days after operation. Then, it is a difficult matter to determine the patency of the cystic duct and the time of operation, and a much more difficult matter to determine an occlusion of the hepatic duct or the ductus communis choledochus. For these reasons it would be advisable to adopt the conservative course of establishing a biliary fistula.

The point suggested by Dr. Summa was practically illustrated by a case occurring in speaker's practice, a short time after he had read the theory advanced by Flint, according to which the fatal result is ascribed to the presence of cholesterin in the blood. Flint called the condition cholesteremia. In the speaker's case, an examination of which was made by Dr. Dean, cholesterin was found in every tissue in the body.

As to the subject of chronic interstitial nephritis, every surgeon is aware of its invariably fatal termination, and it was doubtless the cause of death in this case. We know that patients are often unaware of the existence of a chronic granular degeneration of the kidneys, and the first evidence of it is the fatal coma. The sclerotic changes in the arterial coats is a prominent symptom, so that the disease might be considered one of the whole circulatory apparatus, instead of being confined to the kidney proper. Repeated careful examinations of the urine are absolutely necessary, and if these are made of morning and afternoon urine, we will seldom fail to detect albumen. The specific gravity is also of importance; it should be taken of the entire urine passed in 24 hours and should average between 1,017 and 1,024.

Just what the influence is which is exerted upon the heart by chloroform in granular degeneration of the kidneys, is not definitely known at present, but attention was first called to it by Emmett. Chloroform acts beneficially in cases of valvular lesions of the heart, so that the influence is not a functional one, but probably due to a changed condition of the muscular structure of the organ.

Dr. Jacobson considered the vomiting in uremia as an effort of Nature to rid the system of certain toxic products, which normally should be eliminated by Nature's filter, the kidney. Patients with granular degeneration of the kidneys should not be operated upon unless the case is urgent. Such an instance occurred in his practice in a case of hepatic abscess complicated by cirrhotic kidney. The woman was suffering acutely and it was imperative that something should be done. Thirty hours after operation uremic coma supervened and vomiting became excessive. The woman recovered, however, and is now apparently in good health.

Dr. Hulbert agreed with Dr. Funkhouser, that it is often difficut to determine the obstruction in the biliary tract, and that work is often imperfectly done in cases of this character. There should be no doubt about the nature of an obstruction, or its removal, before the operation is completed.

The examination of the biliary tract need not be a difficult matter if the proper incisions are made. While it may be very difficult to explore in this region with a horizontal incision paralled to the margin of the ribs, a vertical incision, made at the outer border of the rectus and enlarged by a transverse one 2 or 3 inches in length, will always permit of a thorough examination.

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ABSTRACTS

MEDICINE.

Inflammation of the Parotid Gland as a Complication of Pneumonia.—The *Archives Cliniques de Bordeaux* for January publishes an article on this subject by Dr. J. Hobbs in which he says that among the complications which are but rarely seen in pneumonia parotiditis certainly has its place. If we refer to special works, to Grisolle's "Traite de la pneumonie," for example, we see that thin author gives only a very short chapter to it, and insists on its exceptional character and its almost fatal tendency to suppuration. During the last few years this question, from the bacteriologist's point of view, has come up again, and several authors have occupied themselves with the subject, and have arrived at the conclusion that it is a question of pneumococcous origin, the pneumococcus having been found by them in the pus of the parotid abscess.

In these cases acute parotiditis occurs suddenly as the fever diminishes in pneumonia, and, after inflammation characterized by redness, swelling, and a sensation of false fluctuation; there is formed in twenty-four or forty-eight hours at the most, an abscess which it is necessary to open freely in a very short time.

When a bacteriological examination has been made it has been ascertained, sometimes on gelose tubes, sometimes on plate cultures, that the pyogenic agent is the pneumococcus and this important result became undisputable when the authors could, by direct inoculation with the pus in a mouse, reproduce in that animal a true reaction of the pneumococcus, a generalized pneumococcia.

The explanation of suppurating parotiditis thus be comes easy, and we should rank it among the extra-pulmonary tendencies of the pneumococcus, along with endocarditis, meningitis, and otitis, of which M. Netter has demonstrated the distinctly pneumococcus origin. But the result may not be accounted for in in this way, says the author. Parotiditis occurring even during convalescence from pneumonia, is not inevitably destined to suppurate; the whole thing may be limited to a hard and painful tumerfaction, more or less resisting pressure on palpation, giving also a sensation of false fluctuation and becoming completely resolved in a certain length of time without which intervention (incision or puncture) will be necessary.

The author relates several cases; among them the following, which had come under his own observation: The patient was a man, forty-one years old, who entered the hospital on August 31. He stated that four years before he had received violent shock in the right thoracic region. The day after his entrance into the hospital the fever was high, there was considerable dyspnea, and the temperature was 102.1° F. An external examination of the chest revealed nothing abnormal and the ribs were not fractured. On percussion, a noticeable dullness to the right and behind was found, the thoracic vibrations were exaggerated. Auscultation in the same region revealed a crepitant rale, there were characteristic rust-colored sputa, and the patient was very weak. There was no albumin in the urine.

On Septemper 2, the temperature was 102.8°, and the patient was very delirous; the stethoscopic symptoms were somewhat modified. A very intense tubal souffle was found in the lower two thirds of the right lung, and a few crepitant rales were again heard. On the 4, the temperature was 104°, and the condition was the same. On the 5, the souffle was not so loud, expectoration was more abundant, and the temperature was 102 6°. On the 6, the patient's condition was a little better, and the urine was abundant. Auscultation revealed very numerous subcrepitant rales in the lower half of the right lung; percussion, which was very painful behind, showed dense dullness. The temperature was 102.2°. The patient's face had a pinched look; he did not eat and complained of an intense thirst. The expectoration was always abundant, but it had lost its viscid consistence and its discoloration; in was now seropurulent. The temperature 102°. On the 9, the patient expectorated pus. Percussion showed a zone of dullness behind and to the righ, in lower third, over a surface a little larger than a five franc piece; at this point a true gargling and an exaggerated resonance of the voice were ascertained. The temperature remained at 102,2°, and the patient's general condition was not ameliorated. Further, he expectorated constantly, especially in the morning, as in the case of a true vomica. It was now the twelfth day, says the author, and all these symptoms pointed to the existence of an abscess following pneumonia. On the 13, the local condition of the lung was becoming ameliorated; expectoration was less abundant, the dullness was less extensive, and the cavitary symptoms had lost their distinctness. On the 14, the patient complained of pain in the left parotid region. At this point a tumefaction invading the masseter in front and tending to extend below the angle of the jaw was found. Here the skin was red; on palpation, which was very painful, there was a sensation of profund resistance to pressure. Examination of the buccal cavity did not show anything in particular. On the 15, the pain was again intense, and the lowering of the inferior maxilla was almost impossible. The skin was red and hot. On palpation, it was thought that there was fluctuation. The temperature was 100.8°. On the 16, the tumefaction had greatly diminished; nevertheless, a puncture was made with Straus's syringe, which did not give a drop of liquid; meanwhile the author started cultivations in two gelose tubes. At the end of 4 days there was no trace of a colony. On the 18, the tumefaction had completely disappeared and the patient began to eat.

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Convalescence in this case was particularly long and marked by icterus which lasted nearly two weeks. At this time the patient had alimentary glycosuria and there was albumin in the urine. The treatment which was carried out during the entire course of the disease was essentially tonic and directed, in the beginning, to antisepsis of the degestive canal. Cachets containing eight grains of benzo-naphthol were given successively, one each day which was followed by salol in doses of thirty grains a day. Creosote (in potions and inhalations) was also administered for the pulmonary abscess, which, however, had perfectly run its course On October 18, the patient left hospital completely cured.

What significance, says Dr. Hobbs, should be given to this case? What is the pathogeny of parotiditis aborted in some degree, of a fluxion of the parotid? Should it be ranked with suppurating parotiditis due to the pneumococcus, or should it be comletely separated from the list of the extra-pulmonary pneumococcus causes? The latter opinion, says the author, is too exclusive.

Without doubt, he says, it was not here a question of specific pneumococcous infection of the parotid gland, since in the cases mentioned there had not been suppuration, and suppuration, so to speak, is the pathognomonic characteristic of the metapneumonic complications. Further, the bacteriological examination had given negative results. The objection may be raised that inoculation of the mouse had not been made; that, surely, was a weak point, but the sole fact that the puncture had given no inoculable liquid removed from this objection a part of its value.

The author was led to connect this inflammation of the parotid gland with an aseptic glandular alteration, and here, he says, he could not but accept the division made by Claisse and Dupre, in their work, "Les Infections Salivaires." These two authors had to distinguish the canalicular alterations, which are always septic and suppurating, from certain aseptic glandular alterations depending on a general cause, occuring as dystrophia following serious poisoning or an infectious disease.

From an anatomical point of view this glandular dystrophia can only manifest itself by a simple modification in form of the glandular culs-de-sac and of their cells. In one case Claisse and Dupre observed necrosis with destruction of the epithelial cells and of their nuclei.

From a clinical point of view, it is here a question of a common and simple infection, occurring during pneumonia, which was especially serious in this case, putting the patient in a condition of the least resistance. This inflammation of the parotid gland, which is so remarkable for its short duration and its easy resolution, may be compared to the parotid tumefaction described for a long time as occurring in menstruation, in blonnorrhagia, in grippe, or even in gout, and distinguished from those serious forms of parotiditis, constantly suppurating, where the pneumococcus is found in pneumonia and Eberth's bacillus in cases of tythoid fever.—N. Y. *Med. Jour*

The Study of Heredity.—In his address before the Abernethian Society Sir James Paget drew attention to the great gaps which exist in our knowledge of the laws of heredity. Some of the broad facts of heredity are familiar enough, and are indeed too palatable to be overlooked even by careless observers. That gout, cancer, rheumatism, tuberculosis, and insanity, to take a few examples out of many, are often inherited is a well recognized and certain fact, but, says Sir James Paget, "it has never been studied carefully what may be the result when one parent has one transmissible disease and another has another; what comes if one parent is a member of a cancerous family and another a member of a tuberculous family. Do these two diseases in any respect disturb one another? Are they mutually exclusive, or do they mingle together? We know that acute tuberculosis and acute cancer never make rapid progress together; they seem in so far as that to be antagonistic. But what comes of it when they are mingled together by inheritance? Of that I think we certainly know nothing." This is only a specimen of numerous questions which might be put in connection with the subject of heredity, but are for the present without any certain answer. Is heredity more usually through the male or the female? If a son or daughter strongly resembles the male or female parent, will he or she be likely to develop the diseases occurring in the corresponding stock? Why does disease sometimes "skip a generation" only to reappear with increased virulence? Why does the epilepsy of the parent become sanity in the child, or *vice versa?* How comes it that the female transmits the tendency to hemophilia, but is herself exempt, while the male who suffers does not usually propagate the disease? We might multiply these queries a hundredfold, but they are sufficient to show how much darkness still envelopes so patent and all important a fact as the inheritance of disease.

Some of the laws of heredity are approximately known, although often their *raison d'etre* is inexplicable —as, for example, the law that disease often skips a whole generation and reappears in the generation that follows. This fact has long been observed, and is known as "the law of atavism." It seems to involve the assumption that an individual apparently quite healthy may contain in his organism the seeds of disease, for example, tuberculosis or cancer, and transmit the tendency to such diseases to his offspring although he has never presented any symptom of them himself. This may be so, but if such a theory be correct it intensifies our conception of the mystery of pathological processes. If it could be shown in such cases that the "latent" seeds of disease (we are compelled to use figurative language in this connection for want of better) remain latent until certain favoring conditions combine to bring them to maturity, the mystery would be materially lessened, but in many cases we have no evidence that such

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is really the true explanation. It may, however, be regarded as often a probable hypothesis. * * *

A great deal of work still remains to be done in connection with the heredity of phthisis. It is generally asserted that from thirty to forty per cent of the cases arising in practice occur in infected families, but it is striking how various are the figures given by different observers. Owing to the great frequency of the disease and the probability of infection, it is evident that many cases of apparent inheritance might be otherwise explained. It would be a great gain to practical medicine if we had decisive evidence as to the influence of heredity upon phthisis on the one hand and the frequency of infection on the other. We are still without any quite satisfactory theory to harmonize the apparently certain facts that pulmonary tuberculosis is due to a specific bacillus and that it is frequently transmitted by inheritance. Some French observers published a few years ago evidence tending to show that the actual bacillus of tubercle was conveyed to the offspring through the ovum, but this view has not been generally accepted. Many believe it to be more probable that the patient transmits simply a constitutional delicacy or some peculiarity of the pulmonary tissue which renders the individual more liable to become the subject of bacilliary infection; but it can not be said that we have any certain information on the subject.—*London Lancet.*

The Immunity Conferred by an Attack of Infectious Disease.—Maiselis has published important statistics bearing on the subject of the length of the periods of immunity conferred by attacks of infectious disease. This well-known principle, which is the basis principle of the work of Jenner, Pasteur, Koch, Behring, and of all the workers in the field of serum therapeutics, has been misstated by various writers on medicine, some of whom affirm that the survival from one attack of an infectious disease confers life long immunity. Gregory, for instance, says: "The immunity against a second attack of an infectious disease is one of the most universal and important principles in pathology. It is applicable not only to variola, measles, etc., but to all diseases which are due to a poisonous influence or miasm." Samuel says: "By the survival of a single attack of an infectious disease, immunity is generally conferred for the remainder of life." The same opinion has been expressed by Hebra, Henoch, Thomas, with regard to the acute exanthemata; by Griesinger, Murchinson, Zuelzer, as to typhoid fever; Audouard, as to Asiatic cholera.

On account of the great theoretical and practical interest of the question, Maiselis has collected from literature the following authenticated cases of repeated attacks of infectious diseases in the same patient:

Small-Pox.—Two attacks, 526 cases; three attacks, 9; seven attacks, 1; total, 536.

Scarlet Fever.—Two attacks, 144 cases; three attacks, 7; four attacks, 1; eight attacks, 1; seventeen attacks, 1; total, 154.

Measles.—Two attacks, 103; three attacks, 3; total, 106.

Typhoid Fever.—Two attacks, 203 cases; three attacks, 5; four attacks, 1; total, 209.

Asiatic Cholera.—Two attacks, 29 cases; three attacks, 3; four attacks, 2; total, 34.

In order to avoid the danger of including cases in which relapse might have been mistaken for a second attack, only those cases have been included in the preceding tables where the interval between the attacks was sufficiently long to preclude the possibility of the second and third attacks being relapses.

Considering the fact that all cases of second attacks of infectious disease are not recognized, and that the deeply-rooted belief in immunity among the laity, as well as among physicians, often renders the diagnosis of a second attack difficult to establish, one is led to believe that repeated attacks of infectious diseases may not belong to the rarities in medicine. This consideration also tends to establish the analogy between the immunity conferrad by natural and artificial processes. The quantitative principle of immunity suggested by Erlich and systematically elaborated by Behring applies also to the natural processes of immunization.

In seems probable that so many difficulties would surround an exact determination of the period of immunity conferred by a given attack of infectious disease, that no exact statement of the safety period could be applied to particular cases. If a child is taken with scarlet fever, we have no means of estimating the amount of toxin absorbed, or the length of time the so-called natural antitoxin of the disease is present in effective quantity. The period of immunity conferred by the injection of given quantities of the artificial antitoxine of approximately known strength is a matter of doubt and study; and the estimated length of the period of immunity, as defined by Behring himself, has lately been changed. If the period of immunity is so difficult to compute in a case where we can approximately calculate the amount of antitoxine injected, how much more difficult will it be to calculate that conferred by the absorption of an unknown amount of toxin, and consequent antitoxine production?—Boston *Med. and Surg. Jour.*

SURGERY.

Cerebral Tumors.—Messrs. Beevor and Balance report a case of subcortical cerebral tumor treated by operation in the *British Medical Journal* of January 3. The salient points of the case were summed up as follows:

1. The gradual onset of the paralysis, involving successively the right ankle, the knee and hip, and then extending, after the lapse of seven months, to the joints of the right hand, and then to the whole of the upper extremity. Finally speech became affected.

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2. The classical symptoms of intracranial pressure were present—headache, vomiting and optic neuritis.

3. The mental condition greatly deteriorated.

4. There was some loss of sensation, affecting the rightly limbs chiefly, while the face entirely escaped.

5. There was no family history of tubercle, and no personal history of tubercle or syphilis.

6 Under anti-syphilitic remedies, taken for over six weeks, the patient's condition not only did not improve, but grew worse.

The presence of a tumor in the left cerebral hemisphere was determined, and by a consideration of the the type signs of involvement of (*a*) the cortex, (*b*) the internal capsule, and (*c*) the centrum ovale, the authors came to the conclusion that the tumor was subcortical.

The patient was a married woman, aged 39.

The following points may be mentioned with regard to the technique of the operation in this case: The flap adopted was the U-shaped flap of Horseley, and included the periosteum. This flap was planned to expose a large area of the skull, *e.g.*, the coronal and sagittal sutures were exposed, about one inch of the posterior part of the left frontal bone, and practically the whole of the parietal bone, with the exception of the anterior inferior angle, and the part immediately adjacent to the lambdoid suture. The portion of bone to be removed was then mapped out with a large saw. It was in shape a parallelogram, whose anterior and posterior borders, running parallel with each other, were planned also to run parallel with the sutures of Rolando. The anterior border encroached a little on the frontal bone at its lower end. The upper border of the parallelogram corresponded with the sagittal suture, and extended along it from the pregma for fully 3½ inches. The lower bor der was parallell with the upper, and 2½ inches below it. The portion of bone thus removed would include the parietal eminence, and would allow of the free exposure of the upper part of the motor cortex, especially of the toe and ankle centres, at the upper extremity of the ascending parietal convolution, which it was desired to thoroughly examine.

The removal of the bone thus mapped out was accomplished by the aid of the same large saw, by means of which it was divided up into small quadrangular pieces by vertical and horizontal cuts. Those pieces were then easily raised from the dura by an elevator. The use of cutting forceps facilitated their removal. Along the upper boundary, part of the bone was disarticulated at the sagittal suture. In this way the bone was removed, and the middle meningeal artery lay upon the dura without being wounded. The dura bulged considerably.

The authors considered it clearly desirable to per form the operation in two stages, the edges of the scalp wound were brought together, and antiseptic dressing applied.

Six days after the first operation the second operation was performed. The scalp wound was easily separated with the handle of the knife, and thrown down without bleeding. A little clot, which was lying on the dura, was taken away. As large a square dural flap as possible was cut, and folded down over the scalp flap. On exploring the ascending parietal convolution with the finger, the cortex here, being greatly thinned, was broken through, and the tumor, of a whitish-gray color, was seen. An attempt was made with the finger and the handle of a sterilized silver spoon to shell it out, but it was found to be continuous with and infiltrating the surrounding cortex, and also the substance of the hemisphere, about an inch below the surface, and towards the front and middle line. The consistence of the tumor was semi gelatinous, softer than the normal brain substance, and it was found easier to remove it with a silver spoon than in any other way. A considerable hemorrhage occurred at the time, and as it was not well controlled by filling the cavity in the brain by cotton wool a series of fine silk threads were passed through the cortex for a depth of three-quarters of an inch all round the affected area, except for about an inch at the median line, and tied so that all vessels within the operation area were controlled. The area was about two and a quarter inches in diameter. A free incision was then made through the cortex all round, just within the line of suture, and all the included part, brain and tumor, was taken away by means of the spoon. The tumor extended to median surface of the hemisphere, and so a part of the marginal convolution and quadrate lobe was removed, the falx being clearly exposed. In this way as much of the tumor as was visible was removed; but as the line of junction of healthy and diseased tissue was so indeterminate, it is not possible to say that the whole tumor was excised; it is indeed, probable that it was not.

When all bleeding had ceased, the dural flap was stitched carefully in position with fine silk. The scalp flap was brought into position by horsehair sutures.

The antiseptic employed during the operation was mercuric perchloride (1 2000). The brain wound was constantly irrigated with this solution, so as to keep it clear of blood, by syringing a wet cotton-wool mop over it. No marine sponges were used, and the operation area was kept free from blood, not by mopping or touching the brain, but by the stream of fluid.

Dr. Colman made a microscopical examination of the tumor, and reported the growth to be a sarcoma, with round and spindle cells.

The patient recoved from the operation. On August 29 (forty three days after operation) the condition of the patient was recorded as follows:

Her mental condition was very much improved, and, from being morose and dull, she became lively, and amused the other patients. She had no paralysis of the face, and could now carry the right hand to the chin, but could not move the fingers or thumb; she could walk with a little assistance; she had good movement at the hip and knee, and some movement at the ankle, but no movement at the toes. With regard to sensation, she could appreciate light touches everywhere but

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over the right upper limb, and localization was still faulty. Speech was perfectly restored.

On November 20, the condition of the patient was carefully recorded and narrated in detail by the authors. The patient was restored to her normal mental condition; speech was perfect; there was no headache; movements of the face normal. With regard to sensation, there was pain in the right shoulder, especially when moved. No anesthesia anywhere, and she localized correctly. No loss of muscular sense. The movements of the arm and leg were restored to a remarkable ex tent; in fact, the various movements were carried out in normal direction at all the joints save the thumb and the toes. There was no movement possible of the toes, and the thumb could not be extended, and the movements at the shoulder were limited. Action of the movements thus accomplished were weak, *e g*, flexion of the knee.

The case thus reported by Messrs. Beevor and Balance, of which the above is a brief abstract of their article as published, illustrates many points in the present position of brain surgery. The possibility of making an accurate diagnosis as to the localization of a tumor is strikingly indicated (Unfortunately, lack of space prevents us giving the details of their argument in arriving at their diagnosis). The authors are to be congratulated on their skill in this regard, also on the success of the operation, the details of which are worthy of careful study. The authors point out a remarkable feature in this case, namely, that, thought so large an area of cortex had been removed, the patient had recovered sensation completely, and, with the exception of the toes, ankle and shoulder, she had recovered almost completely as regards motion, but with diminished strength as compared with the other side.

The method of checking hemorrhage from the brain substance after removal of the tumor is worthy of notice.—*Canada Practitioner.*

Deaths Under Chloroform.—A death recently took place during an operation performed under chloroform at St. Bartholomew's Hospital. The patient, a man aged forty, suffering from cancer affecting the pharynx and structures of the air and food passages, was admitted to have tracheotomy performed, an operation the nature of which was explained to him, and was rendered imperative owing to the extensive charac ter of the invasion of the neoplasm. The man was given chloroform according to the method in vogue at this hospital, and when under its influence the operation was commenced. While the tracheotomy was in progress the man's breathing stopped. Death is, however, stated to have been due to heart failure caused by the combined shock of the operation and of the chloroform. The necropsy revealed extensive carcinomatous infiltration. The operation as such, we presume, is not calculated to produce severe shock, but doubtless the condition of the man and the probable narrowing of his respiratory outlet rendered him less able to bear shock or withstand the depression due to the anesthetic. We are indebted to the chloroformist in the following case for a lucid account of the fatality. The patient, a muscular but pale man, fifty five years of age, of abstemious habits, was admitted into the Wallingford Cottage Hospital on November 9 for treatment of extensive disease of the carpus on the right side. On the 10th he was put under the influence of chloroform; the anesthetic was given from a wire mask covered with flannel. He was lying on his back and was rather nervous. A careful preliminary examination of the heart and lungs was made, and they were found to be in a satisfactory condition. A dram of chloroform was poured upon the wire inhaler and given slowly. From time to time half a dram more was added. The man appeared to take the anesthetic well. The chloroformist noted the respiration, the pupils, and the pulse, and observed no departure from the normal. When under the anesthetic the operation was commenced, an incision being made, and immediately the pupils dilated and the respiration ceased. Instantly the chloroform was stopped, the head was lowered, and artificial respiration was commenced by Sylvester's method. Nitrite of amyl, hot flannels to the precordium, hypodermic injections of ether, and galvanism were resorted to without avail. The artificial respiration was kept up for twenty minutes, as the heart's action was observed after complete cessation of breathing. The same chloroform had been taken without any bad symptoms by another patient just before this patient took it. The truthful narration given can not but prove sadly interesting. That school of thought which maintains that shock is peculiarly prone to make itself felt, in cases in which the narcotism is not rendered profound before a skin incision is made, will find in the mode of death described above a likeness to cases recorded as instances of cardiac inhibition during imperfect anesthesia. Upon the other hand, it would appear that the respiratory center was paralyzed before the cardiac center, at least this was the view of the chloroformist. Such paralysis is, as a rule, the result of an overdose of the anesthetic, and according to the valuable statistics of the Hyderabad Chloroform Commission in most cases was overcome in the Hyderabad experiments by prompt resort to artificial respiration. In the present instance *prima facie* no overdose was given, and the promptest action was taken to restore breathing. We have, however, in speaking of an "overdose" to carefully discriminate between too large a dose being given at one time and the equally perilous and far more insidious overdosage which occurs if through impediment of the breathing by any means interference takes place with expiration. Such an accumulation of chloroform in the blood as happens under such circumstances probably permanently injures the protoplasm of the medulla before any very marked phenomena, save slight and easily overlooked alteration in the breathing, occur. We must be understood to in no way state any of these solutions of the difficult problem, Why does a patient die under chloroform? is applying to this particular

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case; we believe it is useful to apply *pro* and *con* reasonings in all instances of chloroform deaths when the phenomena are sufficiently clearly stated, as in the particular case upon which we are commenting.—*London Lancet.*

Modern Wound Technique.—Dr. Morey of Boston contributed an interesting article to the Mississippi Valley Medical Association upon this subject.

Since Dr. Morey was the first American pupil of Mr. Lister and the first to introduce the antiseptic methods of wound treatment into our country, his opinions are the more valuable, especially as he has until the present continued to be an original investigator and contributor.

He pleads for a much more careful training in bacteriological research and urges a surgical apprenticeship upon all who would be surgeons, the responsibility of this high office permitting of nothing less.

From Dr. Morey's summorizing we quote:

Recognize the infectious material as if it were a visible, palpable element.

Based upon such knowledge, enter upon an intelligent sterilization of patient, material used, assistants, and by far the most important of all, the operating hands. Having made an aseptic operation, close the wound by buried tendon sutures and seal with collodian, without drainage. This having been effected, the wound is safe and the labor, care and anxiety, attendant upon all our earlier operations, for the ensuing weeks is entirely avoided. The work is really ended when the patient leaves the operating room. Once mastered, the technique is really easy. Science has not alone shown the safe and sure way towards recovery, but, as is usually the case, in the end, the easy path to pursue.

Let the coming century find no practicing surgeon who is not master of his technique, as the high priest of a most sacred calling. * * * Almost unconsciously we are led to think of the modern surgical technique as an art rather than a science. Let us so accept it. Based upon science the work should be artistic. A blundering surgeon may be aseptic, but this should never be the excuse for clumsiness. The true surgeon should be skilful, which term means so much, full of that skill which makes his work really correctly automatic, like the master of a musical instrument who, through it, pours forth the enraptured strains of soul inspiring moving power with never the thought of hand, or bow, or string.

Anesthesia and asepsis have brought into surgery a small army of men who lack the training which half a century ago was considered absolutely essential to success. Then, to be a surgeon, meant an apprenticeship. Should it be less now? The greatest danger to day lies in the willing, enthusiastic, but half trained recruit, with which one ranks are over crowded. Here as elsewhere comes the law of the survival of the fittest, but at what fearful cost of life! Matched, almost overshadowed by the self condemnation which permits of no condonement. * * * A great art is not build in a day. We profit by our predecessors. In us the coming generation will have much to criticise, let it also be indebted to us for much of real value in both the science and in the art of surgery.

Tight Lacing and Gall-Stones.—According to Dr. Marchand, the relation of tight-lacing to the development of gall stones is rendered very clear by noticing the situation of the gall-ducts in the liver deformed by tight lacing. The furrow caused by lacing runs directly across the right lobe of the liver, as the result of which there is a tendency to atrophy of the gall-bladder. When tight-lacing has been practiced to an extreme degree, an artificial fissure is formed in the liver, giving rise to what is termed the "lacing lobe," which carries with it the gall bladder. The constricted portion of the liver is found to be just at the point of junction of the gall bladder with its duct. In these cases, according to the author, it is common to find the gall-bladder greatly distended, extending far beyond the border of the liver, and frequently an examination made post-mortem reveals the presence of gall stones. Stagnation of the bile is well known to be one of the most important causes of the formation of gall stones. A change in the composition of the bile, from catarrh resulting from congestion of the mucous membrane and the thickening of the bile due to failure of the gall-bladder to completely evacuate itself, gives rise to the formation of small masses which serve as nuclei for calculi; hence anything which obstructs the free outflow of bile through the cystic duct must favor formation of gall-stones. Marchand is also of the opinion that many cases of cancer of the liver should be attributed to tight-lacing. It is only a few years since Langenbuch was obliged to open an abdomen to remove a "lacing-lobe" of the liver which had been so completely separated from the rest of the organ as to cause its death, rendering its removal necessary. In view of such facts as these, it is the duty of every physician to take special pains to warn his patients against the evil effect of this pernicious practice. Few women are conscious of the fact that they are injuring themselves by tight-lacing. But physicians generally preach to deaf ears in an audience composed largely of votaries of fashion.—*Deutsche Medicinische Wochenshrift; Medical Record.*

Specific Organisms of Vaccinia and Variola.—The etiology of small pox is a problem of such interest that any contribution to its study of *prima facie* merit should be brought promptly to the attention of the bacteriologic world. During the past year Mr. J. Christian Bay, bacteriologist of the Iowa State Board of Health, has carried on a series of investigations concerning the specific organisms of vaccinia and variola, a detailed account of which has been forwarded to the *Medical News*. Through the courtesy of the author the *Journal* is enabled to present a summary of the important points of his paper. During the past thirty years

many bacteriologists—among whom the author cites Chauveau, Hallier, Luginbuehl, Beale, Cohn, Weigert, Klein, Klebs, L Voigt, Pfeiffer, Hlava, Koch, Feiler, Crookshank, Copeman, Rille, Martin, Coze, Feltz, Baudoin, Plaut, Zimmermann, Toussaint, Buttersack, Landmann and Draer—have investigated the small pox and vaccine lymph, and some of them have found one or more cocci to which they ascribed the role of *causa morbi;* others were of the opinion that animal parasites caused the disease; and a few—*e g.*, Plaut and Zimmermann for sheep-pox—have isolated bacilli of different species, common saprophytic bacteria, none of which seemed to have any causal relation to vaccinia or variola. Plate cultures after Koch's method reveal no organisms in vaccine or small pox lymph, neither do microscopic examinations. The author prepared test-tube cultures in Pasteur's fluid and in bouillon rendered alkalin with Cl Na; vaccine points were dropped, or samples of small-pox deposited, in the medium under the usual precautionary measures. On the first day after incubation the medium became slightly turbid and, during the second and third days, a grayish, folded, greasy-looking film developed on the surface. Microscopic examination showed the presence of bacilli, measuring 0.6 to 1*u* by 0.2 to 0.3*u*; they are colorless, motionless, and bear one spore at each end of the cell—hence the organism has been referred to Kern's genus *Dispora* and named *Dispora variolæ.* It was found, with three exceptions, in sixty-five cultures from vaccine points and in forty cultures from the lymph of confluent small pox; two cultures failed to respond to inoculation. The organism is somewhat polymorphous; in old cultures the cells are arranged to a great extent in threads; the dimensions of the cells also vary as above stated. Spores are found, being formed at the beginning of the cell development, and the number of spores constantly increases as development progresses in old cultures very few vegetative cells are found, while the number of free spores largely predominates. The author is of the opinion that the organisms, cocci, described by others as *Micrococcus vaccinæ M. variolæ, Microspheria vaccinæ,* etc, are identical with the spore stage of his *D. variolæ;* and believes that his observations and conclusions as to the facts of the spread of small pox warrant the assumption that the spores are the main source through which the disease, itself, as well as vaccinia, is reproduced. Mr. Bay is further investigating the results o inoculations upon animals, and experimenting with a view to the preparation of vaccine in the laboratory. It is in this last object that health officers and sanitarians will be most directly interested, and hope that Mr. Bay's claims may be substantiated by other investigators.—*Jour. Amer. Med. Ass'n.*

An Object Lesson for Anti-Vaccinators.—The *Official Bulletin* of the Iowa State Board of Health for the month of February contains a statement as to the result of the introduction of small-pox infection to an isolated household, the members of which differed in regard to vaccination. We produce Dr. Kennedy's account in his own words. The facts need no comment: "A few months ago a family of anti vaccinationist lived in a county in this State. One member of the family—consisting of father, mother and four children—was vaccinated, the others not. They lived happily,and apparently safely, so faras small-pox was concerned,on their quiet Iowa farm. A nephew from Germany came into the family,coming from the Fatherland to find a heme in this great land. On the vessel on which he was a passenger small-pox broke out, and he was exposed. He had been vaccinated and escaped the disease. His uncle's family, into which he went with his infected clothing, with the exception of the mother, were destitute of the protective influence of vaccination. Within twelve or fourteen days after the advent of this nephew and cousin, small pox in a malignant form broke out, and father and four children were smitten down with the dread disease, and four out of the five, including the father, died, the mother and young man alone escaping, and they, simply because they had been fortunate enough, sensible enough, to be vaccinated. And yet the anti-vaccination fanatics would ignore all such lessons, and see nothing in them except a coincidence."—New York *Medical Times.*

OBSTETRICS AND GYNECOLOGY.

The After Results of Symphysiotomy.—Dr. Hans v. Woerz (*Centl f. Gyn.*) has followed up the cases operated on in Schauta's Klinik by suturing the bones together. Of the ten cases one died of sepsis, and two could not be found. The remaining seven cases were subjected to various tests to ascertain the firmness of the osseous union. The patient was first made to walk slow, then fast, next in the horizontal position the finger was introduced into the vagina and held in contact with the lower surface of the symphysis and a number of movements with the thighs carried out. All of the seven women walked naturally and were enabled to attend to their duties. They felt as well as they had before the delivery, had no pain on walking, running or climbing stairs. The examinations of the pelvis showed an excellent result, a strong cartilaginous symphysis could be felt. In no case was a flaring of the bones or a non-apposition of their ends made out. Incontinence of the urine due to irritation of the silver wire was not present in a single instance. He sums up the results of his investigations as follows:

1. In all of the five cases in which the bone suturing had succeeded there was without an exception a rapid, complete and permanent union of the ends of the symphysis. The woman already on leaving the bed had the full power of locomotion and at this time an examination showed a firm union of the symphysis cartilage—conditions which were found unchanged a year later.

2. In the four cases in which for various reasons the bone suturing was not so successful there was a difference between the early and late results. At the time of leaving the hospital there could be made out a greater or less degree of diastasis between the ends of the symphysis which however became corrected by wearing a firm bandage. In one case the locomotion was interfered with for months afterward. In the two cases examined later a firm union of the bones was found and the fate of the two others could not be ascertained.

3. In cases not treated by bone suturing a *restitutio ad integrum* may certainly take place but it is questionable if the union would be found firm a year later.

4. The injury of the soft parts in cases of symphysiotomy in Schauta's Klinik was not followed by any untoward sequelæ.—*Amer. Gynec. and Obst. Jour.*

Remarks on Ectopic Pregnancy.—In this communication I shall not discuss the subject of ectopic pregnancy in a systematic manner, but desire to call attention only to certain points concerning it. My experience with ectopic pregnancy embraces twenty five cases, fourteen of which were seen within one year. This would indicate that cases of ectopic pregnancy do not constitute a constant percentage of one's operations. During the year in question about fifteen per cent of the abdominal sections done were for ectopic pregnancy, whereas in the previous years only two per cent of such cases were met with. Prior to this exceptional run of cases ectopic pregnancy had been present in between three and four per cent of my abbominal sections.

I had the curious experience of doing three successive celiotomies for ectopic pregnancy in four days, and of having four women in the hospital at the same time, who were convalescing from operations done for this condition. This undoubtedly was a very curious if not a unique experience.

All of the twenty-five cases were instances of tubal gestation. Of these the tube was unruptured in four, in twenty rupture had taken place, and in one a tubal abortion was under way.

The case of abortion was of interest because of the peculiar form of the blood clots which filled the pelvis. These were coiled up much as though they had been ground through a sausage machine. The ovum was located about the inner third of the tube. Hemorrhage was caused by partial separation of the ovum. The blood clotted in the tube, and the clot was forced out as a sausage-shaped mass, by the continuance of the hemorrhage.

In nineteen of the cases, a diagnosis of ectopic pregnancy was made (including two in which it was strongly suspected) before the operation, and in six the condition was supposed to be some other morbid condition of the uterine appendages' such as tubo-ovarian inflammatory conditions, or adherent ovarian tumors. Of the cases in which a diagnosis was made (one strongly suspected), three of them were instances of unruptured tubal pregnancy, and seventeen(two strongly suspected) of cases in which rupture had taken place (including the case of tubal abortion). In two of the cases a diagnosis of ectopic pregnancy had been definitely abandoned, because of the absence of symptoms supposed to be characteristic of rupture, and the operation was done with a diagnosis of pelvic tumor.

Following the dictum of Mr. Tait, the doctrine has become current, that a diagonosis of ectopic pregnancy before the rupture is impossible, and that the dagnosis of this condition after rupture is extremely simple. My own experience does not bear out this view.

In two of the cases embraced in this report, a diagnosis of unruptured ectopic pregnancy was made, and operation urged. In one case the operation was done, and an ovum of from four to six weeks' growth was found in an unruptured tube. The diagnosis was confirmed by Dr. Piersol of the University of Pennsylvania. In the second case operation was refused. In about a week after the operation was urged rupture took place, followed by an enormous internal hemorrhage. Operation was then done, with a fatal result. In one other case in which rupture had not taken place, the diagnosis was not made, not because the symptoms were not sufficient, but because they were not carefully looked for. This patient had had a number of attacks of pelvic peritonitis, and was supposed to have had one of her "old attacks." As opertaion had been repeatedly urged for the tubal disease, which was known to exist, it was now accepted, and done without further study of the case. In one other case of unruptured tubal pregnancy, the diagnosis was considered uncertain, and to be either an adherent ovarian cyst or a tubal pregnancy. That is to say, in the four cases of unruptured tubal pregnancy which have come under my notice; in two of them a positive diagnosis was made; in a third it was suspected and in the fourth, while the diagnosis was not made, it was not because the symptoms did not warrant it, but because they were not carefully looked into.

Of the case of ruptured tubal pregnancy with hemorrhage into the peritoneal cavity, a diagnosis was made in seventeen cases, in three cases it was not even suspected, and in two cases this was ruled out because of the absence of symptoms supposed to be characteristic of the condition.

This experience appears to be a sufficient warrant for disputing the currently received dictum concerning the diagnosis of ectopic pregnancy. So far as my experience goes, the cases in which rupture had not taken place were as easily diagnosed as those in which it had taken place. I believe that in a a large percentage of cases, whether rupture has or has not occured, the symptoms and physical signs are so characteristic, that the diagnosis is just as certain as in any other form of pelvic disease. On the other hand, in a considerable percentage of cases, neither the physical signs nor the symptoms are sufficient to enable even a careful, trained observer to arrive at a positive diagnosis. He may "suspect" the condition, or he may think that the condition is "either ectopic pregnancy or a pelvic tumor,"

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but he is not able to give a definite opinion. Still another class of cases will be met with, in which the symptoms are not at all suggestive of ectopic pregnancy, even though rupture has taken place. The usual menstrual history is absent; the pains supposed to be characteristic are absent, or else are of so indefinite a character as not to be distinctive; and the faintness and collapse supposed to characterize rupture does not take place. I have had three such cases, in which there was no ground to make a diagnosis of ectopic pregnancy, and yet operation disclosed this condition, with rupture and internal hemorrhage.

In the twenty five cases there were four deaths. All of these cases were desperately ill at the time of operation. In the first, the pregnancy had advanced to the fourth month, and the adbomen was so filled with blood that it was protuberant as in abdominal dropsy. The patient blanched, and had a rapid pulse. She died within thirty-six hours, in hyperpyrexia. The conditions present in the second case that died were very similar to those in the first, except that the pregnancy was not so far advanced. The patient lived nearly a week, and died apparently of exhaustion, from acute anemia. The third patient who died was moribund at the time of operation, the abdomen being even more distended with blood than the first two cases. The three cases belong to a special class—those in which the rupture is followed by an enormous and sudden internal hemorrhage, the bleeding being so free that there is no opportunity for a hematocele to form. The fourth patient who died had general septicemia at the time of the operation, having a temperature of 105°. The hematocele had suppurated, the entire pelvis was covered with a slough, and the left broad ligament and pregnant tube were distinctly gangrenous. She died at the end of a week of general septicemia. In this case the death was due to septicemia present before the operation, and the local conditions were such that recovery was impossible. The other three deaths were distinctly due to the enormous and sudden hemorrhage which had taken place. All the other cases recovered, including those in which rupture had taken place, and those in which the rupture had been followed by moderate hemorrhage, presumably from small vessels, so that there was an opportunity for the blood to clot and an hematocele to form. All the cases in which the pelvis was filled with clots, even though considerable free blood was present, recovered—the explanation being, in my judgment, that the bleeding had been form small vessels, and had extended over a considerable period of time, perhaps occurring on different days, or during different weeks, so that the drain upon the circulation was not sudden, and time was afforded for the blood-making organs to supply to a greater or less extent the loss which had been suffered.

At this time I wish to to say only a word concerning the principles which should be followed in operating.

1. The operation should be done as soon as the diagnosis is made.

2. The principles which apply to all pelvic surgery are equally applicable to cases of ectopic pregnancy, in which the condition of patient is good.

3. When the operation is done upon a patient in extremis, rapidity in operating is essential to to success.

Nothing should be attempted which is not absolutely essential. The opposite appendage should not be removed unless it is painly an immediate manace to life. The pregnant tube should be rapidly separated from its adhesions, ligated and removed, and this should be followed at once by free irrigation of the peritoneal cavity. The abdomen should be left full of water, as this plan saves the time necessary to dry the peritoneal cavity by sponging, and also supplies the vessels with fluid, to make good in part the loss they have sustained. Drainage should always be used in this particular class of cases. It is my purpose to use transfusion in all such cases in the future, although I have not done so in the past. These patient die of acute anemia. Death is largely due to the fact that there is not enough fluid in the vascular system to maintain life.—Charles P. Noble, M. D, in *Amer'n Gynec. and Obst. Jour.*

A Case of Advanced Extra-Uterine Gestation, in which a Living Child was Removed, the Placenta Left, and the Abdominal Wound Entirely Closed.—Charles J. Cullingworth (*Brit. Med. Jour.*) reports a case which he at first regarded as a normal intra-uterine pregnancy; but at the end of eight months when paroxysmal pains set in, an examination of the cavity of the uterus showed that organ to be empty, and an operation for extra-uterine pregnancy was immediately done. The fetus was found lying in the peritoneal cavity enveloped in its membranes. It was removed alive and lived over seven months. At birth it measured nineteen inches in length and weighed five pounds. It was perfectly formed. During the operation most of the membranes were cut away, the umbilical cord was ligated and cut off short. The amniotic cavity and the peritoneum were sponged dry and the abdominal wound closed. Patient showed no signs of shock during operation. Sutures were removed on the eleventh day and for over three weeks progress was satisfactory. On the twenty-fourth day there occurred a rigor lasting ten minutes; later in the day temperature rose to 103.4° and then to 104 2°, pulse-rate 138. The temperature fell on the next day but patient was very restless and complained of abdominal pain. On the twenty-sixth day the abdomen was opened through the old incision. The placenta presented in the wound, and a considerable quantity of purulent fluid escaped. The right broad ligament was transfixed and tied, and the placenta was cut away from its attachments. The edges of the wound were sutured into apposition and a drainage tube inserted. Patient died half an hour after operation. Dr. Cullingworth attributed the death to shock acting on a dangerously de-

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bilitated patient, and considered that the result was "so far accidental as to afford no solid reason for rejecting this plan of treatment." He reports the case as being the first instance of extra-uterine pregnancy, with a living child, in which the method of closing entirely the abdominal wound and leaving the placenta *in situ* was carried out —*Amer. Gynec and Obst. Jour.*

NOTES AND ITEMS

Harvard Medical School.—The resignation of Prof. H. P. Bowditch from the office of Dean of the Harvard Medical School, after a period of service extending over ten years, is made the occasion for a review of the progress made by the School during that time in the annual report of the President and Treasurer of the Harvard College. In 1883–84 there were 243 medical students; in 1893–94 there were 472 in attendance. During the same period the number of the faculty has increased from twenty-two to twenty-eight persons, and that of the instructors from thirty to fifty-eight; a new building was occupied; the laboratory method of teaching was extended and improved; the activity of the school as a center of medical investigation was heightened; the compulsory four year's course of study went into effect; the annual receipts and expenses of the school increased by about 75 per cent. A most satisfactory showing for the decade, and a conclusive proof that a high standard of medical education is not incompatible with increased classes and revenues, but the contrary.

Advance in Medical Education.—Certificates of having worthily completed the preparatory medical course of the Nebraska State University will hereafter admit students—without entrance examination—to the first year classes in the Department of Medicine and Surgery of the Michigan State University and to the St. Louis Medical College; to the second year in the Northwestern University Medical School, to the University of Pennsylvania Medical Department, to the Omaha Medical College and to the John A. Creighton Medical College; and to the third year of the Cincinnati College of Medicine and Surgery. The preparatory medical course of the University covers a term of three years and is open to students of either sex who have a fair mastery of English grammar, arithmetic, descriptive and physical geography and elementary history of the United States; students possessing higher qualifications are given credit therefor on entering and can thus shorten their term. The first year's work includes a thorough course in English, a course in Latin, algebra to quadratics, the first two books of geometry, logic and elementary courses in botany, chemistry, and physics; in the second year structural and physiologic botany, the chemistry of the metallic elements and their compounds with five hours' laboratory work each week, rhetoric and theme writing, lectures and laboratory work in physics, sound and heat, general osteology, hygiene and sanitation and physical training in the gymnasium; the third year covers pharmaceutic botany, a continuation of the study of the metallic elements and their reactions with laboratory work, comparative anatomy and human osteology, histology and embryology, psychology, including a study of the nervous system, sense organs, psycho-physical methods and results, instincts, consciousness, attention, association, habit, memory, emotions, will, dreams and hypnotism and a course in general physiology. It is not alone the mastery of these branches, as preparatory to the study of medicine, which should be found useless, but the training in habits of study itself—the acquisition of the tools of study and the skill to use them. The course is a distinct advance in the direction of the higher medical education.—*Journ. Am. Med. Ass'n.*

Physical Degeneracy in Prostitutes.—In his "Etiology of Osseous Deformities," Dr. E. S. Talbot traces the association of physical degeneration with the criminal classes and has made some interesting observations on the anomalies found in prostitutes, showing that these women are a class in themselves, presenting marks of arrest of development and physical and mental degeneracy. The cases examined were not selected, but were taken as they occurred in hospital from those not disfigured by syphilis. In 150 prostitutes thus examined the following abnormalities were noted:

Malformation of the head,	62.
Development of occipital protuberance,	62.
Very receding forehead,	18.
Hydrocephalic,	15.
Various anomalies of the face, prognathism, etc,	64.
Ogival palatine vault,	38.
Congenital division of palate,	14.
Vicious implantation of teeth,	62.
Hutchinson's and Parrott's teeth,	19.
Absence of lateral incisors,	10.
Badly margined ears (Morel),	16.
Defective ears, deformed, etc,	47.
Anomalies of extremities,	8.
Local asphyxia,	2.

The comparison of these cases with educated women and illiterate peasants is interesting; 82 per cent of the prostitutes present more than a single anomaly, while among educated women there is found only 2 per cent, and in the peasant class 14 per cent —*Jour. Am. Med. Ass'n.*

Function of the Suprarenal Capsules.—Some light is thrown upon the nature of the function of the suprarenal capsules by a series of experiments made by De Dominicis. He concludes (*Arch. de Phys.*) that total extirpation of these bodies, either simultaneously or with an interval between, invariably causes death

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after a maximum lapse of two, three or four hours. This ablation immediately causes intense shock, with phenomena of stupefaction and of general collapse, especially of the heat. Section of the spinal cord in advance, or the exhibition of atropin, notably retards these symptoms, and at the same time diminishes their intensity. The theory of auto intoxication appears to De Dominicis less in accord with these facts than with that of a violent neurolytic action, thus apparently confirming the recent opinion of Fusari that the suprarenal glands are nervous ganglia.—*Jour. Amer. Med. Ass'n.*

Malarial Influence in Abortion and Sterility.—At the Indian Medical Congress last December, Mr. A. J. Weatherly, M.R.C.S., Eng., L.R.C.P., Lond., gave his experience in Africa, Florida and India on malarial influence in abortion and sterility. In England and in healthy parts of South Africa where malaria is unknown, he had ninety-one confinements at term with four abortions. In malarious parts of Africa and India he had 100 confinements at term and 48 abortions, and in Florida 80 confinements at term and 22 abortions. He has observed that a large proportion of his cases, though living in malarial districts, did not abort at times of attack of fever—in fact, in very many cases malaria showed itself only in the habit of abortion. He has also noted that a very much larger proportion of women are sterile in malarial districts than in others and that if they reside many years in such districts this sterility becomes permanent; whereas, if they leave before too long a time has elapsed they may bear children. He adds: "The influence of malaria on abortion and temporary sterility is still more marked in the very deadly malarious climate of Florida, where I saw twenty-two cases of abortion to thirty confinements at term, and ten cases of temporary or permanent sterility in a period of two years in a very small district."—*Jour. Amer. Med. Ass'n.*

Student—"Why does the Belladonna mean 'beautiful lady?'" Professor—"Because it is paralyzant to the heart and a sympathetic stimulant, two characters of the 'beautiful lady.'"—*The Corpuscle.*

Treatment of Vomiting in Pregnancy.—This most obstinate and disagreeable ailment is successfully treated if a vegetable digestive is used like Zumo-Anana. Read what Dr. Theo. Grenier says:

NAUBINWAY, MACKINAC CO., MICH., Feb. 25, '95.

GENTLEMEN—In a case of pregnancy where my patient was young, discouraged and cross, on account of persistent vomiting, I have obtained the most gratifying results by prescribing Zumo-Anana.

The palatable mixture took my patient by surprise and she soon began to gain in strength and cheer up. Her trouble has almost entirely disappeared and I notice that my prestige has raised in her esteem.

GEO. GRENIER, M.D.

UNITED STATES INDIAN SERVICE,
Cheyenne River Agency, Ft. Bennett, S. Dak.

DR. A. A. MARKS.—

DEAR SIR—On September 18, 1889, I performed the operation of amputation, at the middle and lower third junction of the left leg, on Ceca Yamni—"Peter three Thighs"—a Sioux Indian attached to this agency. He was a sufferer from necrosis of the tarsus and a complete invalid. Absolutely unable to stand, to say nothing of walking. I did not succeed in getting his consent to operate until I told him about your excellent limbs—how he would be enabled to walk, run, ride, work, etc.—and that his deformity would be completely hidden to strangers. In due time the stump healed, and I sent you measurements for his leg. It came by express and I immediately adjusted it. To my surprise it fitted him perfectly, and at this writing he is going about among the Indians with as much ease and comfort as could be desired, and with the greatest satisfaction, both to myself and to himself. Inclosed is his photograph in war costume, which he sends you with his compliments.

Z. T. DANIEL, M.D., Agency Physician.

LOCAL ANESTHETICS AND COCAINE ANALGESIA—Their Uses and Limitations. By Thomas H. Manley, A.M., M.D., New York. St. Louis: J. H. Chambers & Co., 914 Locust Street. 1894. Price, $1.50. A most comprehensive volume of 200 pages, including a valuable index.

This publication places in our hands the only work in which Cocaine Anesthesia is classified in a manner to be of use to the practitioner. The hypodermatic method of using Cocaine for operations is thoroughly discussed and illustrated by many successful cases.—*Gross Medical College Bulletin.*

RUSSIA'S EMPRESS GAINS STRENGTH.—The producers of "Mariani Wine" (Vin Mariani) should, according to report, soon have a splendid market in Russia for their nerve and brain tonic, as the Dowager Empress has, at the suggestion of the Princess of Wales, drunk it since the death of her consort, with the most remarkable and beneficial results. It seems that Her Majesty is one of the many delicate persons with whom stimulating drugs like quinine, iron and Peruvian bark disagree, but such is not the case with the wine tonic referred to. It is well known that the Princess of Wales also derived increased strength of brains and nerves from it during her last great trials. Moreover, in consequence of the benefits obtained by the Empress, a great demand for this tonic has sprung up among ladies of Russian aristocracy suffering from "nerves."—*The Court Journal*, London, January 12, 1895.

SEND twenty-two cents in stamps to McArthur Hypophosphite Co., Boston, for McArthur Pocket Diary, 1895. "Handiest and most useful little book for the physician that we have seen. Contains doses of drugs including new remedies, a list of disinfectants and how to use them, antidotes for poisons, methods of treating emergencies, an obstetric ready reckoner and other valuable information."—*Brooklyn Medical Journal.*

MOUNTAIN GROVE, MO., January 8, 1893.

W. W. SCOTT MARSHALL.—

DEAR SIR AND DOCTOR.—Case Bags to hand this morning Have examined them carefully and will say that they look more like it, and if I had language to express it more strongly than that I am more than pleased I would do so. They are the case bags for me. * * * Let me say again, I am well pleased with the case bags. Yours respectfully,

D. L. BENSON.

Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Possibilities of Medicine.

BY DR. JAMES OSBORNE DE COURCY, ST. LIBORY, ILL.,

Member of the Illinois State Medical Association; Member of the American Medical Association.

Read before the Twentieth Annual Meeting of the Mississippi Valley Medical Association, held at Hot Springs, Ark., November 20, 21, 22 and 23, 1894.

In a pensive contemplation of the possibilities of medicine, possibilities of active, of preventive medicine, possibilities within reasonable reach, the mind inadvertently turns to the past; possibly to feast upon the achievements by which the annals of medical history are embellished.

Indeed, that one may consider the possibilities of an untried, an unknown future, in the line of any scientific thought, it seems but natural that the mind should rest upon the experience of the past, which is the legitimate endowment of both present and future.

It is by the silver light of experience that the faithful, untiring searcher for truth is enabled to break the seal of the great and wonderful book of revelation.

Taking a panoramic view of the past and present situation of the medical world, and the world of medicine, there are seen many beautiful landscapes, the beauties of which are, in each epoch, more or less marred by the clouds of obscurity, superstition or prejudice which have circumscribed the advancing science.

No period in the past has surpassed the present in the production of men who have made greater efforts and greater advancements in forwarding the cause of medicine, in attempting to perfect the science in its various branches.

It is not the province of this paper, however, to eulogize the heroes, the distinguished of any age, neither to magnify the results of any branch nor to unduly discriminate between the advancements of the present over the past, but to set an abridgment—a synopsis in part of past and present conditions—before the members of this Association that we may the better be enabled to correctly diagnose the future; and to plan such treatment as will consummate the possibilities of medicine.

That this thought involves a proposition of gigantic proportions is most keenly felt by the author, as well, we trust, by very many co-laborers.

It presents a problem of the greatest possible magnitude, the solution of which challenges the best thought, the careful, deliberate consideration of the medical fraternity.

Every one who is engaged in the toils of medicine should feel it incumbent upon him to contribute whatever of value experience and study have placed at his command to the accomplishment of this great end: not only for his own satisfaction and benefit, but for the advancement of the best interests of the profession and the whole people.

The portals of the temple of science to day stand ajar. The way is clear; but the medical hosts approach with slow step, burdened with the knapsacks of prejudice which must be laid aside without the walls before the army can enter and ascend the heights.

A single mind may grasp the possibilities within the reach of any great enterprise, but it requires co-operative, concentrated effort upon the part of all concerned to carry out the policy of the business, and to reap a munificent harvest.

One mind conceived the idea that the earth is spherical, another that it rotated daily on its axis, a third that it made an annual tour around the sun; but many are the scientists who have labored to establish these great truths.

So in medical science, comparatively few may conceive and point out the possibilities of medicine; but in order that the possibilities be reached it is of the greatest importance that there be oneness of purpose.

The amassing of great treasure of whatever nature is the product of co-operative, concentrated energy. If there be an exception, it must be something else other than the science of medicine.

Whatever else may be said of the strides of medicine during the ages gone by, it must be admitted that there was very little of real scientific advancement until the brightest men of the profession conceived the necessity of putting their heads together in attempting to solve the problems of pathology and applied therapeutics.

Then and not till then was the banner of medical science elevated and raised to a standard of respecta-

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bility among all the other arts and sciences of civilization.

Now that a step in the right direction has been made, let us lay aside the besetting sin that we may realize the possibilities before us.

Truth must be accepted from whatever source. Concessions must be made. The pipe of peace must be smoked; and with a warm devoted heart, directed and dedicated to the true, the best interests of the profession and the people, the blessings consequent will be incalculable.

Hitherto comparatively few men have been engaged in the work of developing medical science; while some in the rank and file of the profession have lain supinely upon their backs, contented for others to do their professional, their scientific thinking, writing, speaking.

This condition of things ought not so to be; and this state of things must cease to live and only numbered with the things of the past, else the profession, the world, will never realize the possibilities of medicine.

Some legal practitioners, even now, are plodding along single-handed—the "one gallus sort of way"—without connection, or any sort of affiliation with a single one of the medical organizations.

Every student should be taught, as a necessary part of his medical education, to believe and to realize the fact that the whole fraternity has a just claim upon his professional ability, and whatever of valuable experience his practice may materialize.

No man should feel that he has either the moral or professional right to ask any reputable medical college to pass upon him the degree of "M.D." and clothe him with the loyal paraphernalia of a legal practitioner unless he is willing to bear his share of professional responsibilities, and to do his quota of labor requisite to the best interests of the people and the science of medicine.

Great and many are the needs of the profession. In the hive is room for all the bees; but no drones are needed, none wanted. Only the willing, active laborers should seek, should obtain admittance.

The possibilities of active medicine, as to scope, are necessarily limited, not otherwise. The pathology of disease once mastered, the entire range of therapeutic agents scientifically established, it is only a matter of time when artful application will dispel, as the morning light the shades of night, the hosts of bacteriological infection, sepsis, contagion.

And like the "legion" of demons in the swine, they will seek their own destruction in the sea of the past.

In the great fields of surgery and active medicine where so much has already been accomplished, we can conceive of no results, however good, stopping short of scientific accuracy as approximating the possibilities of the respective departments of medical science.

When we turn our minds to the subject of pre ventive medicine, we have touched the keynote of medical science. When we touch that key we send forth a wave of melody that shall make glad the hearts of all men, that will echo and re-echo through the ages to come until its possibilities are reached, culminating in the realization of perfect mental and physical manhood.

It is in this channel, this line of medical research, that much of the ability of the profession will be found pleading with the goddess "Hygeia" to reveal unto men the secrets of her sacred majesty.

Men everywhere, as they are enlightened by the light of advancing civilization, will seek the physicians who are able to teach them how to observe mental and physical laws, that being the beneficiaries thereof, they may avoid the evil disasters consequent upon the violation of these laws.

These achievements to the profession, these blessings to the world, are within reasonable reach.

That they could be obtained without organization and concert of action, is an impossibility. When the noble manhood of the thirteen colonies came together under the ties of military power, in the short space of seven years they threw off the yoke of tyranny, and gave to the American people the best government, the best country, the greatest national liberty and blessings that it has ever been the privilege of any people to inherit. Which, without the strong bonds of union would have been impossible.

Realizing and enjoying this blessed inheritance today, the product of union, we appeal to the intelligence of this Association, to the profession of America, for the establishment of a grand central organization in which the profession of the whole country shall be enlisted in the careful study of bacteriology, of therapeutics; of all the branches of active and preventive medicine.

The profession thus united what might we not expect even during the remaining years of the nineteenth century. Legislation, National and State, with adequate appropriations would be secured for the asking; and the medical profession would at once make the grandest stride in the world's history towards the realization of the possibilities of medicine.

When the time comes that the profession can lay self upon the altar of sacrifice, that selfishness and self-aggrandizement shall be expunged from our midst, and men will learn to labor for a common interest—the greatest good to the greatest number—then will the day of triumph begin to dawn; then the profession with the grand possibilities of medicine, "in the sunshine of the world's new spring, will walk transparent like some heavenly thing."

Chronic Laryngitis.

℞ Metcalf's Coca Wine, - - - - - ℥vj.
Sig. Teaspoonful three times a day.

℞ Sennine, - - - - - - - - - ℈j.
Acid. tannic, - - - - - - - - ℈ij.
Aq. menth. pip., - - - - - - - ℥iv.
Glycerin, - - - - - - - - - ℥j.
M.
Sig. Apply with atomizer.

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EDITORIALS

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 914 Locust Street, St. Louis.

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The Public Library and the Medical Societies.

When an agreement was entered into between the several medical societies of St. Louis on the one hand, and the Public School Library, now the Public Library, on the other, and when some of these societies turned over their property—that is, their books—to the institution with which they were making their contract, and moreovor, obligated themselves to pay a stipulated sum towards the purchasing of books and journals, which were to be the property of the Library, it was hoped, and the understanding was, that the medical books would be speedily catalogued and that all the journals which had been recommended by the Library Committees, appointed by the societies, would be at the disposal of the contracting physicians. We do not believe that we are overstating things when we state, without circumlocution or glossing, that the bargain has been a disappointment to the medical profession.

It is about two years ago that the very valuable Library of the Medico Chirurgical Society and that of the Society of German Physicians of this city were turned over to the then Public School Library. These collections contained many a valuable and rare work, and of a special value to the original worker are the files of some of the best medical journals of the world.

Now we positively state, that the authorities in charge of the Public Library have not kept their part of the contract. The medical department of the Public Library, in the condition in which we find it, is utterly worthless, and it is high time that the several societies appoint committees for the purpose of investigating into the unpardonable negligence and breach of faith. Books not catalogued and pamphlets not bound, and kept in packages with strings tied around them do not constitute a library. They might just as well be kept in the cellar and confined in the boxes in which they slumbered for at least a year and a half. Among the journals we miss one of the standard publications of the world, the *Medical Record*. This, too, is unpardonable.

In fine, the whole arrangement as it stands to day is a great injustice to the medical profession and an unwarrantable one at that. We shall return to this theme in our future issues. This is initiatory and confidential.

Another Objection to the Present System of Bacteriologic Diagnosis of Diphtheria.

In a recent issue we have drawn attention to a suggestion as to the improvement of the present system of our health departments of diagnosing diphtheria by bacteriologic examination. The good results already obtained by the present method are generally admitted, but it does not seem to fulfill all the requirements that are expected from it by bacteriologists and above all, the process may be improved as far as simplicity and adaptation to private practice is concerned. At a recent meeting of the Berlin Medical Society Dr. Max Wolff paid a high tribute to the good judgment of the New York Health Department for taking the initiative in the practical application of bacteriological diagnosis in private practice, and in drawing attention to the usefulness of the procedure, he pointed out some of the shortcomings of the present system as used in New York and other cities of the United States, including St. Louis. One of the objections to supplying the practitioners with culture tubes is the fact that the blood-serum becomes dry after it has been kept for some time in drug stores, and thereby loses considerably in its quality as a culture medium for diphtheria bacilli. The serum in some of the tubes may also become mouldy as will be admitted by every one familiar with bacteriological work. If the serum is fresh, the condens water may overflow the inoculating material during the transport of the tubes and wash it off the culture medium. But the main objection is that the process of inoculating the serum by the practicing physician takes up too much of his time. The author prefers therefore a method proposed by Dr. Hesse, of Dresden, which he has made use of in the laboratory and which he finds simple and answering the purpose completely. The whole apparatus consists of a sterilized test tube containing a sterilized glass rod, which is held in place by a sterilized cotton plug. It is only necessary to touch the suspicious

places with the glass rod, or, if these are absent, to remove a little mucus from the mouth or the secretion of the nose, if the latter appears affected. The glass rod is then returned into the tube and the inoculation may be made at a convenient time. According to the author's statement it is not necessary to remove pieces of membrane, for the smallest particles will cause an abundant growth of diphtheria bacilli.

In our judgment Dr. Wolff's suggestion is worthy of careful consideration by the St. Louis Health Department which, as already stated in a former issue of this journal, deserves great credit for the prompt adoption of the method instituted by the New York Board of Health. The improvement of any method of scientific investigation, above all, one of so much importance to the community as to facilitate the bacteriologic diagnosis of diphtheria and which will save time and labor for the general practitioner, can not be overestimated by the profession.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated meeting, Saturday evening, February 23, 1895; the President, F. D. MOONEY, M.D., in the Chair.

***

DR. F. J. LUTZ presented two specimens, which were of unusual interest on account of their rarity.

The first was a very large "Carcinoma of the Spleen," the organ weighing eleven pounds. The patient was fifty-six years of age at the time of his death—the immediate cause of which was acute pneumonitis—and presented nothing unusual in his family history, except that his father died of Bright's disease, and his mother of paralysis.

Examination by palpation revealed an enlarged liver, and the spleen occupying the left half of the abdominal cavity. Pressure over the tumor and both kidneys elicited pain, and respiration was somewhat interfered with by pressure of the tumor.

The specific gravity of the urine was 1011, and it was loaded with albumen and granular casts.

The post mortem examination was made complete, except that the brain was not removed. Besides the enlarged liver and spleen, the right kidney was found white with fatty degeneration, and the left one contained white spots and cysts about the size of a hazel nut. No secondary cancerous deposits were found in the usual sites—the pyloric end of the stomach, the pancreas or the rectum.

The diagnosis is based merely on a macroscopical examination. The specimen is of interest mainly on account of the infrequency of primary carcinomatous new growths in the spleen.

The second specimen was taken from a patient who was found dead, and of whose history nothing is known, in consequence. It was a "Hemorrhage into the Pons Varolii," without an infarction in any other portion of the brain.

***

DR. HENRY SUMMA presented a specimen of "Ruptured, Gangrenous, Tubal Pregnancy, with Ovum," and read the following history of the case:

Mrs. R., aged 35, multipara; has had five living children and two miscarriages, besides this tubal case. Her youngest child is four years of age. Since the birth of this last child the patient has had excellent health, up to sixteen days ago. She assisted her husband, who has been sick with rheumatism since four months, into and out of bed.

Sixteen days ago, whilst thus assisting him, she suddenly experienced a great pain in the abdomen, which pain continued to increase and was accompanied by tenesmus, tormina and nausea. Her medical attendant prescribed castor oil, enema, croton oil and other purgatives, pronouncing her case to be one of hemorrhoids.

Sixteen days after the onset of the trouble I was called in and found her suffering with a well-marked case of peritonitis. On closer examination I found a retro-uterine hematocele, uterus enlarged to about the size of a four months' pregnancy, cervix soft and os patulous, sufficient to permit the introduction of the index finger. Vagina narrowed by an obstructing swelling posteriorly. Greatest pain in the right vaginal region.

I informed the patient and her relatives of the condition present, the probable tubal pregnancy, and the necessity for an operation. The patient was wholly unaware of being pregnant, having had her menstruation regularly. The consent of the patient and her relatives having been obtained she was removed to the Pius Hospital, where the operation was performed on the following morning.

Immediately after the abdominal cavity was opened an escape of peritonitic exudate took place, which was followed by an exceedingly offensive odor and the discharge of an ichorous liquid, containing blood, pus and other detritus. The Fallopian tube on the right side was found in a gangrenous condition, and in it was found the complete gangrenous ovum, which I herewith present.

The long existence of the case is remarkable.

The patient died twelve hours after the operation.

***

DR. HUGO SUMMA presented a specimen of "Ruptured Ectopic Pregnancy." The patient from whom the specimen was removed by operation was twenty-nine years of age, mother of two children, the youngest of which was eleven months old and still nursing.

Menstruation was always regular until the present

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trouble came on. The periods were re-established after the last labor on December 26, a bloody discharge occurring again two weeks later, and a third eight days after the second, or about ten days before the first symptoms of collapse occurred. The discharge ceased until ten days ago, when it recurred, but without pain.

At 3 o'clock in the morning of January 29 the patient was suddenly seized with severe abdominal pain, vomiting and intense diarrhea. The vomiting and diarrhea were so intense, that it was difficult to think of anything else but an acute attack of cholera morbus. Her physician found her in a state of collapse, which had not improved four hours later. The extremities were cold and the pulse could hardly be counted.

Speaker was called in consultation ten hours later, and upon close examination made a diagnosis of ectopic pregnancy, based upon the continuance of collapse for eight hours and the anemic symptoms present. An examination per vagina was not possible, on account of the intense pain on touching the abdomen, and the diagnosis was rendered more difficult on account of an absence of the characteristic changes in the breast.

After the diagnosis was made, operation was proposed, but the patient refused to submit, so that the only measures adopted were to relieve the pain and stop the internal hemorrhage. This was done by opium given per rectum, as everything, even water, was vomited.

The patient recovered from this attack in eight days, and was able to be about and to do her housework until Wednesday, February 22, twenty-six days after a diagnosis was made. At ten o'clock in the evening of Wednesday, the same symptoms occurred. Speaker saw her a second time in consultation, on Thursday at ten o'clock in the morning. At that time a distinct, circumscribed, soft, elastic swelling was found in the right hypochondriac region, extending a little to the left of the median line and about two finger breadths below the umbilicus. The patient now consented to an operation, which was done yesterday morning.

After the median incision had been made nothing abnormal could be detected except slightly injected intestines. After introducing the hand into the pelvis a soft, semi-solid, easily moveable mass was found covering the uterus and its appendix, and which proved to be a blood clot. After a large amount of clotted blood had been removed the enlarged tube could be distinctly outlined. It was removed, and found to be completely closed except at the uterine end where the rupture had taken place. The contents was soft and elastic, except at one point near the abdominal end where resistance to the finger was encountered. A careful incision made at this point first passed through the placenta and then into the amniotic sac. The liquor escaped, and in the sac was found a well preserved embryo, fifteen millimeters long and about thirty-five days old, according to general teaching. There are found the four primary cerebral vesicles, and the first formation of the arm and eye.

The patient is doing well.

Dr. Funkhouser said that there is a distinct connection between salpingitis and ectopic pregnancy, and that the cases are of much more frequent occurrence than is ordinarily supposed.

He was called in consultation to day in what he diagnosticated as a case of ectopic pregnancy. In this case, however, the symptoms indicated the condition more clearly. A distinct mass could be detected at the fornix and could be moved up and down. The patient had not menstruated for some time and had not been pregnant for a number of years. The breasts had undergone characteristic changes and the os uteri was patulous. These symptoms are not absolute, and we must often arrive at a diagnosis by exclusion. Unfortunately the diagnosis is often not made before rupture takes place.

***

Dr. J. Ellis Jennings read a paper (see Medical Review, February 16), entitled,

Earache—Its Causes and Treatment.

Dr. A. H. Ohmann-Dumesnil called attention to an omission in the author's paper, in that he did not mention syphilitic necrosis of the bones of the internal ear as one of the causes of earache. Syphilitic necrosis in these structures causes intense earache, and is generally treated with all kinds of instillations into the external canal, when, in reality, active anti-syphilitic treatment is demanded, not only to relieve the earache, but to check the syphilitic necrosis, which, if allowed to progress, would result in complete loss of hearing power. Anti-syphilitic treatment applied as early as the symptoms appear often results in a preservation of the organ, if not in an entirely normal state, at least of some use to the patient.

Dr. A. Murrell said that the author had brought out some interesting points in the treatment and causes of earache, but had failed to mention malarial earache, a condition which he had met in his practice. He cited the case of a young man who had been treated for two weeks, with douches of the auditory canal, blisters over the mastoid and all kinds of anodynes, without relief. Careful examination revealed no diseased local condition, and it was diagnosticated as a case of post-auricular neuralgia of malarial origin. The exhibition of antikamnia, iron, quinine and strychnia was followed by prompt relief.

Speaker took exception to the practice of deep incisions in cases of acute diffuse or circumscribed otitis of the external ear. It is an intensely painful operation and the pain becomes more intense after the operation and lasts for hours. He had seen no good results from the procedure. He usually employs hot fomentations and soothing applications, and incises when the pus becomes circumscribed. The trouble can frequently be aborted.

Another remedy of great value in acute or sub-acute inflammations of the external auditory canal, the middle

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ear or the mastoid, if employed before suppuration takes place, is antikamnia. It has none of the objectionable features of some other drugs and acts more promptly than others.

Ordinarily, in acute suppurative otitis media, the incision of the drum head is followed by cessation of the pain. That this is not an invariable rule was illustrated in the case of a young lady, treated by the speaker. Here the incision was followed by some relief, but the pain did not cease entirely and gradually grew in intensity until it became unbearable. There was very little suppuration and only slight inflammation, but nothing would relieve the pain except a continuous stream of hot water passed into the ear through a rubber tube from a large reservoir. This was kept up for three weeks before the inflammation subsided. All other remedies failed to give relief in this case.

Speaker had never seen a necrosis of the bones of the internal ear taking place which was not preceded by suppuration of the middle ear. He could conceive how it could occur, however.

Dr. S. Pollak often employs antikamnia in cases of earache, giving five grains every three hours to adults, as it loses effect after that time. Salicylate of sodium was also used with immediate effect by him recently in a rheumatic patient. Hot water, of course, is a sovereign remedy, but he is in the habit of using it by instillation instead of with a syringe. If it is dropped into the ear by the teaspoonful it is just as effective, and, in case of a ruptured drum head, causes no pain as does the syringe. In order to cleanse the canal in this latter instance peroxide of hydrogen is used. Its cleansing properties are wonderful.

Dr. H. W. Loeb had seen so much harm done by the use of chlorate of potash in acute naso-pharyngitis, and so little good resulting from its use, that he is very much opposed to it. It can do no good in ear trouble due to naso-pharyngeal inflammation, as it does not reach the pharynx at all.

Dr. Hugo Summa regretted that the essayist did not mention some measures in the prophylaxis of acute middle ear disease. We know that every case of acute otitis media is due to bacteriological infection, the infection usually taking place through the cavity of the naso pharynx; and every case, especially those following infectious troubles, is due to carelessness in nursing. The common cause is the pus coccus which is present in all human beings, and the nurse should be especially instructed in the necessity of thoroughly cleansing the oral cavity every day.

Dr. A. D. Williams agreed with Dr. Murrell, that deep incisions in diffuse or circumscribed otitis external are not advisable in the early stages. After the furuncle becomes well defined it should be opened freely. If the pain is due to an abscess of the drum, this should be punctured and drained as soon as pus is formed.

The essayist also failed to mention the nocturnal earache so frequently met with in children. The most effective remedy in his hands, for this trouble, has been a solution of atropine, one to five grains to the ounce, dropped into the painful ear. One or two instillations, of three to six drops each, usually suffices to end the trouble. This remedy is also effective in simple acute myringitis, which is one of the most painful affections met with.

Dr. Pollak had heard Dr. Williams make these statements before, and had accordingly tried the remedy in a number of cases, but failed absolutely to achieve any results. The only effect which it produced were dilated pupils, great dryness of the throat, and fear of atropine poisoning.

Dr. Murrell had used the solution with some good results, but protested against the free use of atropine, especially by the family. A rupture of the drum head may occur during its use, in which case the solution would pass directly into the throat and create danger of atropine poisoning.

He asked Dr. Williams to define nocturnal earache.

Dr. Williams defined it as due to a subacute inflammation of the membrana-tympani. The reason why the child cries only at night, is to be explained by the fact that during the day its attention is diverted from the pain by external objects, while at night no such influence exists.

Dr. Murrell doubted that myringitis is a pathological condition *per se*.

Dr. Williams said that it is not a rare trouble. The question of its existence had been doubted before, but he had seen so much of it as to be convinced that he is right.

Dr. Chas. Barck did not agree with Dr. Williams in his explanation of so called nocturnal earache. It is not due to myringitis, but to a slight inflammation of the middle ear accompanied by some serous discharge. The reason for the occurrence of pain only at night is a physical one. During the day, while the child is in the erect posture, the discharge drains through the natural channel into the naso-pharynx. At night, however, while the recumbent posture is maintained, the middle ear lies lower than the naso-pharynx, the fluid accumulates and the distension causes the pain. Children with this trouble should never be allowed to lie on the affected side, but on the opposite one, so as to permit the drainage of the secretions. Oftentimes the pain will cease suddenly and upon examination a small perforation of the drum will be found which has permitted the discharge of the serous fluid.

The severe forms of inflammation of the middle ear lead to the formation of abscesses, and later to perforation of the tympanic membrane and the continued discharge of pus. These cases are more serious, and entirely different from the cases in children referred to.

Speaker had used atropine and had seen it used with good results, but was inclined to share Dr. Pollak's views on the subject. So, too, in regard to the use of warm water; it is about as effective as all the anodynes.

Dr. I. N. Love thought it very pertinent to call attention to the neglected methods of protecting patients

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from ear complications in all acute infectious diseases. In the majority of throat cases, at least, the various cocci seem to have a special affinity for the ear, and knowing the usual route of infection is through the Eustachian tube, we should be constantly on the alert.

He also endorsed the objection to the excessive use of chlorate of potash for which the profession is largely responsible. Few remedies have been more improperly used; and when we consider the dangerous effects upon the kidneys the objection can be better comprehended.

Dr. J. E. Jennings, in speaking of a syringe, did not mean the ordinary piston syringe, but the fountain arrangement where the force of the stream against the drum head may be regulated by the height at which the fountain is placed.

As to scarification of the lining membrane, where it is swollen and tense, nothing gives such instant and great relief. Of course, where there is pus in the middle ear, it becomes necessary to incise the drum and drain the cavity.

Speaker could not understand what Dr. Williams meant by abscess of the drum. In the cases of earache at night, there is certainly a positive trouble of the middle ear, and with that inflammation a serous exudate which caused pain at night by being detained in the cavity.

ABSTRACTS

MEDICINE.

Is Strychnine an Antidote to Cobra Poison?—In the October number of the *Transactions of the South Indian Branch of the British Medical Association* there is a report of a paper on this subject which was read by Surgeon Lieutenant R. H. Elliot, of Madras, who said that it had been his object to ascertain the value of strychnine as an antidote to snake poison, and the two courses which seemed to him to be open had been to experiment on the lower animals and on man. It must be remembered, he says, that the action is based on theoretical grounds so far so Indian snakes are concerned, that strychnine is a dangerous drug, and that it is often very difficult to determine whether any case is one of thanatophidial bite or not. Bearing such important considerations in mind, we can not, he thinks, refuse to accept the term experiment for the strychnine treatment of man.

Before describing his own methods the author cites two objections that have been put forward in regard to previous experiments on animals:

1. That they were carried out on dogs, and that one can not argue directly from one class of vertebrates to another, even though both are mammals.

2. That between the nervous system of man and that of the lower animals there is "only a functional analogy which has been mistaken for a complete identity." The first objection, says Dr. Elliot, occurred to him at the outset of his work, and he therefore did not limit himself to certain sets of vertebrate animals, but chose animals which would as much as possible represent the vertebrate kingdom, and especially the Mammalia. With regard to the second objection, he says, no one will contend that there is absolute identity between the nervous systems of two animals even of the same species, whether they are man or beast, but he strongly maintains not only that there is a functional analogy, but that there is an anatomical analogy, a physiological analogy, a pathological analogy, a pathological analogy, a clinical analogy, a therapeutical analogy, and in fact every kind of analogy between the nervous systems of man and those of the lower animals. It may reasonably be asked what evidence there is of this universal analogy between man and the lower animals in their reactions to cobra poison and strychnine, and in order to answer this the effects of these poisons on the animals which have been experimented on must be compared with the well-known effects of the some agents on man; they will be found to be practically the same.

The strychnine check experiments will show that the first symptom of strychnine treatment is a general bracing up of the nervous system; a few moments later the animal becomes alarmed and its movements tend to be spasmodic; it seems unable to stand comfortably, and a convulsion, either opisthotonic or emprosthotonic, throws it down. Clonic and tonic convulsions alternate, and respiratory spasm is severe, the embarrassment of the respiratory center being shown in the general lividity and in the very rapid breathing during the intervals between the spasms. The least sound or touch brings on a fit in the animal, which if left alone might lie still. The convulsions are attended with severe pain, and the patient usually dies in respiratory spasm or, more rarely, exhausted by frequent spasms. If death is averted, the animal recovers rapidly, the convulsive stage passing into a sleepy condition in which the nervous system seems to be profoundly exhausted, but in which condition the author has never seen an animal die.

With regard to cobra poison, in frogs and lizards the only noticeable points were that the animals showed signs of malaise, paralysis rapidly supervened, spasms usually occurred, and life was extinguished. The earliest symptoms noticed in the Mammalia were drowsiness and loss of control over the limbs, especially the hind limbs. After a short interval the sitting posture is given up, and soon the patient lies helpless, paralyzed, and dying. The respiration toward the end is slow but not labored. The end is often ushered in by a little shudder, a clonic spasm of the limbs, in no wise comparable to the strychnine convulsion. The cobra-poisoned animal retains its consciousness almost to the last. Salivation, says Dr. Elliot, was a very common feature

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of the case in the mammals experimented on. In dogs, pigs, goats and monkeys, as well as in birds, it was a practically unvarying symptom. An examination of the subcutaneous tissue at the seat of the injection showed an extravasation, evidently of an inflammatory nature, around the lesion. In monkeys two additional symptoms were present to which the author especially directs attention. The earliest sign of cobra poison in these animals was the drooping of the upper eyelids. This became so marked in time that the animals tilted their heads back and rolled their eyes down in order to see. This drooping was evidently paralytic. The other symptom was a condition frequently referred to in the notes on monkeys as drunkenness. The animals lost their power of co ordination and staggered about with an extremely drunken look. In one case the monkey seemed to suffer from the optical delusion that a rope was in front of it.

Dr. Elliot alludes to Wall's description of a human being suffering from the results of a snake bite. Most striking, he says, are Wall's allusions to the early drooping of the eyelids and to the feeling of drunkenness, an account of which will be found in Wall's "Indian Snake Poison." These and other points, he thinks, will establish that there is a very close analogy between the various Mammalia, including man, in their behavior to the two poisons. Dr. Elliot describes a number of antidotal experiments made with strychnine in cases of cobra poisoning, and says that out of the whole number, thirty-three, he had not one single case of recovery to record; that in no case did the strychnine save life. Much, he says, must be allowed for the individual idiosyncrasies of animals, nevertheless he thinks that a lesson may be learned—namely, that, given an animal with a poisonous dose of cobra poison, the subcutaneous injection of strychnine often hastens death very noticeably, while it can not be said to retard it materially. It would seem, he says, that death may be hastened by the antidote in two ways:

1. By its increasing the force and speed of the circulation, thus aiding the diffusion of the virus.

2. By the exhausting reaction which strychnine undoubtedly produces on the nervous centers.

The author adds that he believes that the supposed antidotal action of strychnine in cobra poisoning is a delusion and a myth. On comparing the strychnine check experiments with the antidotal experiments, he says, the following facts will be observed:

1. That symptoms of strychnine poisoning manifest themselves as early after the injection of strychnine in the one case as in the other.

2. That in the early stages the convulsions of strychnine are as violent in the one case as in the other.

3. That in the later stages animals die from cobra poison with typical symptoms, and yet the least touch evokes an undoubted strychnine tremor in the animal up to within a minute of death. An intermediate stage occurs in which the victim starts on the least touch or sound, but does not respond with a convulsion.

4. That under the influence of a poisonous dose of strychnine the animal dies as surely when fully under the influence of cobra poison as it does when no such poison has been given.

5. That in some cases strychnine administered in physiological doses seemed actually to determine at once the impending fatal issue.

6. That in an animal poisoned with cobra virus strychnine may produce a temporary stimulation, and so may give rise to a fallacious appearance of improvement.

With regard to the experiments on man, Dr. Elliot relates a number of cases in which the results would seem to show that the action of strychnine was like that of any other cardiac and respiratory stimulant, but that there was any specific antidotal action the author can not admit. In some cases hysteria and fright were strong elements, and in a few cases the histories suggested thanatophidial origin. Dr. Elliot says that he can not accept Dr. Muller's conclusions until he knows of at least one recorded case in which a well-grown poisonous snake struck a man, a woman, or a child; in which that snake was identified by a reliable authority and proved to possess fangs and a poisonous sac, or it was shown that, in another case, a fatal result had followed a bite from this same snake; or in which symptoms of undoubted snake poisoning appeared and were definitely removed by the administration of strychnine. He can not accept cases in which strychnine was given, and, after an indefinite period, "the patient got better." No such cases, he says, are forthcoming, and he thinks that, while experiments on animals condemn, experiments on man do not definitely and distinctly support, Dr. Muller's treatment.—*N. Y. Med. Jour.*

The Increasing Nervousness of Our Time.—Under this rather startling title Professor W. Erb at Heidelberg gave an address some time ago which demands more than a passing notice. Professor Erb takes it for granted that there is marked increase of functional nervous disorders, and he believes that the events of the present century have naturally led to this result. The nineteenth century began in disorder and commotion. France had passed through a bloody revolution which was to be followed by the excitement and exhaustion of Napoleonic adventures; restlessness, political and social, was followed by a period of calm, but, whith the advancing years, labor saving inventions rapidly replaced man and increased wealth, and rendered communication easy—as our author says, time and space seemed to be annihilated.

In science, in literature, all were developing, and with it there appeared incapacity for restful pleasures; rushing from change to change seeming to be the only alternative to work. With overwork there was over crowding and over-stimulation; alcohol and tobacco were used in greatly increased quantities; railway travelling and its nerve-jarring motion still further tended to nervousness; and, so Professor Erb convinces himself, that with

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all this there has been a clear loss of nerve tone to the whole of the highly civilised nations.

Nothing could have been more brilliantly put than the contrast between the normal reaction to work and worry and the neurasthenic and abnormal reaction to the same conditions, and it will be for us to see whether we agree with all that Professor Erb says. According to him, all this rapid restless movement has left an irritable and slow-recovering nervous system, which must be considered as neurasthenic. The essentials of this disorder, which has not been recognized twenty years, are increased sensitiveness, with weakness, weariness, lack of power of endurance, and defective recuperative power. This disorder is a refinement of hysteria and hypochondriasis, and it is the outcome of the conditions of life. He thinks it ought to be found in all periods of excitement and of luxury, but owns that there is no evidence of its existence in Greece or in Rome.

The disorder is to be recognized and to be met by changing conditions, and nerve hygiene is to be considered as much as sanitation. From school days to professional life the human being is to be tended and brought up, his mental, moral, and physical education is to be regulated, his holidays are to be methodised, his business is to be conducted in healthy surrounding, and his cities are to be made healthy and beautiful, with fresh air and beautiful surroundings. Thus the Professor is a preacher of hygienic socialism. As we said before, we have been charmed with the address, but not convinced.

The old question reappears in another form. Is increased insanity and nervous disorder in necessary correlation to developing complexity of society? It must be recognized that the more complex the rules of society the more frequent will be breaches of these rules, at all events, for a time. In developing civilization, too, we have a very perplexing factor added in the survival and the propagation of the non-fittest, and this doubtless adds to the increasing number of the nervous.

We are inclined to believe that there is some slight increase of nervousness, but that there is a much greater knowledge of the subject, and with knowledge comes sub-division and classification. We remember the time when hysteria, in its present connotation, was looked upon as a new and increasing danger to society. This disorder is now recognized as no longer a defect of will for which the patient is to be blamed, and has been subdivided. Hypochondriasis in the same way is no longer considered to be a maladie imaginaise, but is recognized as having some organic basis, and with this progress the so called functional disorders have to be studied apart, and are now placed under the head neurasthenia. We do not believe more women, at all events in England, have "nerves" now than had fifty years ago. With the increase of excitement there has been a still greater tendency to more freedom of exercise, more freedom from conventionalism, and much healthier home surroundings.

One change to which attention might be called is the decrease of religious feeling and the allied emotional excitement. It is thought by our author that over brain-work has had a very serious effect. We have grave doubts as to overwork being established as a cause of neuroses, and we have still greater doubt as to there being any amount of overwork in England. Worry, not work, is the danger, and we believe that danger arises from decreasing and deferred marriage.

We agree with our author in recommending carefully selected mates, and healthy surroundings, and skilled and orderly education, but we do not believe that people will be made good by Acts of Parliament or professional orations, and we do not believe there is any very serious risk to the stability of society in the so called development of neurasthenia.—*British Medical Journal.*

Subnormal Temperature of the Body.—Dr. Janssen gives a detailed account of the various causes which may produce a subnormal temperature of the body, basing his review on the records of 400 cases at the Kiel Medical Clinic, and on cases reported in medical literature. A very low temperature may occur:

1. After the direct withdrawal of heat from the body, as in cases of exposure, of unconscious or drunken persons in a very cold atmosphere, or after immersion in very cold water.

2. After the loss of great quantities of fluids from the body, as in severe diarrhea, enteritis, cholera or profuse hemorrhage.

3. In conditions of cachexia and inanition, such as cancer of various parts of the alimentary canal, severe forms of diabetes, pernicious anemia; during convalescence from febrile affections, and in many chronic mental diseases.

4. In grave circulatory disturbances, as in cardiac failure.

5. In various diseases of the central nervous system, in tuberculous meningitis, at the onset of cerebral hemorrhage and embolism, in some cases of brain tumor, and in general paralysis of the insane.

6. After irritation of sensory nerves, as in intestinal strangulation, in renal and gall-stone colic, internal perforation of the intestines, etc., and after surgical operations.

7. In extensive skin affections, such as sclerodermia and extensive burns.

8. After fevers, where the temperature may long remain subnormal; or in the course of certain fevers, as in pyemia.

9. In cases of poisoning by phosphorus, atropine, morphine, carbolic acid, and in alcoholic intoxication; also in the autointoxication of uremia, and in diabetic coma.

In some healthy persons subnormal temperatures are occasionally observed without any apparent cause. Numerous examples of very low temperatures in the above-mentioned diseases are given in the original, and

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Janssen concludes that subnormal temperatures occur much more frequently than is generally supposed, and that a depression under 33° C. (91.4° F.) is by no means rare. The facts brought forward by the author also show that low temperatures *per se* are not grave prognostic indications. Very low temperatures may occur without any symptoms of collapse, and in severe collapse the temperature may be normal. Subnormal temperatures are unfavorable prognostic indications, especially when they occur and persist in cachectic patients.—*Deut. Archiv. f. Klin. Med.; Pacific Med. Jour.*

Communication of Typhoid Fever.—At the last annual meeting of the British Medical Association, Dr. P. W. Williams, Senior Assistant Physician, Bristol Royal Infirmary, reported five cases of typhoid fever as tending to prove that this disease may be communicated by the breath or expectoration of infected persons. Three of the cases were brothers, and the fourth a nurse who had been nursing the first case. The first, fourth and fifth cases died, and in two of these the post-mortem examination revealed all the typical lesions of typhoid fever, also ulceration of the larynx. As it is practically impossible for any case of enteric fever to be communicated by fecal contamination in the Bristol Royal Infirmary, by reason of the elaborate and careful precautions taken,—and as the first case was delirious and was coughing and expectorating in all directions, it is concluded that in this way the nurse in attendance contracted the disease. The fever in these cases was of peculiarly virulent type. All three in the Infirmary began with very severe headache and backache, profound nervous prostration supervened very early, and all three died apparently from respiratory failure. In two at least there were laryngeal ulcers, and probably also in the third, the nurse. In one there was purulent discharge from the ear, and in another an abscess formed in the arm. Cultures in agar from the spleen and larynx of the fifth case gave identical micro-organisms corresponding in every respect with the Eberth-Gaffky bacillus of enteric fever. These cases would seem to explain the possibility of typhoid fever being infectious, as maintained by Budd and endorsed by Collie; and emphasize the necessity for more careful prophylaxis in cases which exhibit laryngeal complications. The practical importance of bearing in mind the possibility of typhoid fever communication by the expectoration cannot be over-estimated. The true nature of laryngeal ulcers in typhoid fever is still an open question, authorities differing as to whether they are simple catarrhal ulcerations following the somewhat common complications of this disease, catarrhal pharyngitis and laryngitis,—or specific ulcers analogous to the ulcers in the intestines. Osler states that he believes that the bacilli have not yet been found in the ulcers, and Fagge, Murchison, Roberts, Liebermeister, Strumpell and Bartholow are cited by Lincoln as of opinion that the ulcers are always secondary and are not specific lesions of the typhoid process. On the other hand, Klebs, Rokitansky, Landgraf and Morell Mackenzie are among those who take the view that they are due to a specific deposit upon the laryngeal mucous membrane.

Infantile Myxedema.—William P. Northrup (*Archives of Pediatrics*), discusses myxedema as illustrated by two cases systematically observed and treated in hospital.

Case I.—Female, 9 years old; parents not consanguineous; labor normal, not tedious; no instruments; up to nine months of life considered a perfect child; nothing of interest in history of parents; mother has two healthy children. At nine months this patient ceased normal development, and at nine years is mentally no older while physically it merely thickened. When the child was nine months old the mother thought that it did not sit up as her other children had done, and sought advice for the supposed weakness of the spine. She has sought aid from many sources, but has long since given up in despair. The patient looks like an idiot. Its head is large. Its color is peculiarly tallow-like. The hair is thin and poorly nourished; has no luster. This cretin has the characteristic flattening of the bridge of the nose, a tilting back, the nostrils facing forward. It has diffuse swelling under lids, puffiness of upper eyelids, pendulous cheeks, thick, anemic lips. The tongue is swollen and protruding. Has fourteen first teeth. Gums are eroded, suppurating and filthy. The arms and legs are thick, the feet and hands stumpy; belly prominent and embossed with usual umbilical hernia. The skin, while never sweating, was soft and not abnormal except upon the hands and feet, where it had a parchment-like wrinkling. Patient had no hard or firm edema.

The "supra clavicular pad" is soft and flabby. The thyroid gland is present and seems a little enlarged.

Treatment.—At hospital her temperature was found to range from 99.5° to 100° daily; respiration 16 to 20; pulse 80 to 88; obstinately constipated; gums habitually ulcerated and foul.

Plan of treatment was to administer a reliable form of sheep's thyroid gland, regulating the amount by the range of the temperature. Crary's formula was used. The directions were to begin with one minim three times a day, increasing the dose one minim every second day until the temperature rose and try to keep the latter at a point just below 100° F. On the fourth day the temperature overstepped the limit and the thyroid was stopped for a while.

After eight days of treatment the child was improved in these respects: Tongue markedly smaller, countenance brighter, taking more food and greater variety. Cut two teeth (canines). Good natured and much brighter the mother thinks. Bowels are regular.

Case II.—Male, 12 years old; German descent. In hospital seventy-six days; improved. Family history not known. Patient is short and stumpy, head large, long antero-posteriorly, flattened at bridge of nose, nasal openings pointed forward, limbs short and thick, abdo-

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men prominent. Looks fairly intelligent, eyes bright. When suddenly asked his name he would seem to be mentally rummaging to find it. He would shape his lips, take a long breath, and yet the answer was delayed. When it finally came it was a thick half-nasal mumble. He seemed to be good-natured and happy.

Treatment.—Thyroid extract (Crary's), one minim three times a day, and increased by one minim until the temperature reached 100°. The progress of the boy was favorable in these respects. He seemed mentally brighter, was a little more active, and grew in height 1.5 cm.

Non-Operative Treatment of Hemorrhoids.—Gibbs, who writes on this subject in the *Post-Graduate*, makes no distinction between the two common varieties of piles—the internal and external—because the treatment of either answers for the other. There is a very painful little tumor frequently seen on the verge of the anus, very much the size and color of a huckleberry, consisting of a small thrombus in one of the marginal veins, covered partly with skin and partly with mucous membrane. If let alone, the clot is absorbed and the tumor disappears, or else becomes infected, suppurates, and cures itself spontaneously; but in either case only after, perhaps, a week of suffering. In these cases the proper plan—and few patients will object—is to use a few drops of cocaine, laying open the cavity and pressing out the entire clot, thus curing the trouble and stopping the pain in half an hour or less. If, on the other hand, this little operation is not permissible, there is nothing to do but undertake three or four days' treatment, based on general principles, consisting in cathartics, preferably podophyllin or cascara, rest in bed, and cold or hot applications. Cocaine he has not found always satisfactory, though it does sometimes work to a charm. Among the wet applications, either hot or cold, his preference is for some preparation of witch hazel or the common hospital lead and opium.

Last, and not least, is the time honored suppository of opium and belladonna, so dear to the hearts of the medical profession. This is the recognized hospital treatment in New York, and covers all cases of pain from any cause whatsoever, when the lesion is low down, in reach of the anus, but in severe cases rest in bed with catharsis accomplishes far more in a given time.

More painful still, and more difficult to handle, is that complication of marginal hemorrhoids known as fissure. It is most usually found posteriorly in the median line, overlapped by a fold of protruding hemorrhoid. Here again, comes up the question of operation. For the most part when the writer finds a case of this sort that does not respond to the general treatment just laid down, he strongly advises giving ether, stretching the sphincter, cutting the fissure, and removing the hemorrhoids, thus radically curing at once an old chronic disease. Next best is the treatment already mentioned, when enforced as vigorously as possible.

Not infrequently these fissures heal quickly under local applications of nitrate of silver not stronger than 20 grains to 1 ounce, repeated not oftener than once in twenty-four hours; while, on the other hand, the solid stick is very apt to convert a small tear in the mucous membrane of the anus into a chronic, intractable ulcer. The temptation to use morphine in very severe, prolonged pain is great, yet the harm it does in these cases is not to be forgotten. Admitting the truth that constipation is the direct cause of acute symptoms in chronic rectal diseases, we have no doubt in saying that a three or four days' course of morphine will reconcile almost any patient, no matter how timid, to either death or operation, after the first passage over an "intolerable" fissure. Verily, "constipation is the thief of time." A less frequent cause of pain, as a symptom of piles, may be seen when a mass of tumor prolapses and remains outside of the body, swollen, red and perhaps gangrenous. Here the same procrastinating treatment will, in a week, more or less, help to diminish the acute symptoms. To summarize: In order of importance, rest in bed, unloading of the bowels, sensible diet, abstinence from alcohol, and an abiding faith on the part of the medical attendant that subsequent and severe attacks will induce a great sufferer to submit to an operation involving no pain or risk to life, with a guarantee of no more trouble.

The second symptom already spoken of is hemorrhage, usually accompanying the act of defecation, and varying from a few drops to an ounce or more. Most people do not bother with "a little thing like this," simply because it entails no pain.

On the first occurrence of bleeding, many patients are more or less frightened until they have assured themselves that they have "nothing but piles," and let it run on indefinitely, except in those rare cases when the loss of blood begins to reach the point of exsanguination; but the majority of cases are allowed to continue or stop spontaneously. Hemorrhage, whether profuse or not, can be easily controlled, if the bleeding spots or area can be seen, by careful applications of nitric acid, or by touching with the Paquelin or galvano-cautery. There is no pain unless the skin margin is burned, and one application should be sufficient. Of course, any destruction of healthy mucous membrane does harm, and the cauterization should be superficial and limited to the bleeding points or areas. Such cases as require etherization and ligation the author has read of, but not seen.

Prolapse of internal hemorrhoids occurs in advanced cases where the tumors are large and flabby. Whether they return to the cavity of the rectum with or without assistance after defecation, this symptom causes but trifling annoyance. It is not till the sphincter becomes somewhat relaxed and allows protrusion at any time, on standing or walking, that any real distress occurs, and this brings us back again to the subject of pain and

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what to do for it. In these severe cases local treatment is not very promising. Local applications or cauterization, thorough reduction, and laxatives are worth trying, especially if re-enforced by a few days' rest in bed. If these fail, there is nothing but operation. Last and worst of all are cases of prolapsed hemorrhoids that refuse to be returned, become gangrenous, inflamed and extremely painful. There is then absolutely nothing to do but rely on the cure and wait for the sloughing to destroy enough tissue to allow retraction and contraction.

The general principles already laid down are to be applied in the many nervous reflexes so common to all rectal diseases; symptoms referred to the bladder, urethra, ovaries, intestinal tract. After successfully quieting one or all of the symptoms of which we have spoken in such detail, there is nothing so useful as a local tonic as cold water applied to the perineum twice a day with a bath sponge; better than any suppository or astringent, used copiously, not inside the rectum, but outside of it. We have omitted all mention of carbolic acid injections, for the reason that this method of treatment is in its true sense a surgical operation devised for the purpose of doing away with venous tumors, and liable to all the dangers and complications of cutting with knife and scissors, such as great pain, infection, abscess, sloughing to any extent, and secondary hemorrhage. Were we discussing operative measures it would have to take its chance with the ligature, the clamp and the cautery. Summing up in a few words, the non-operative treatment of hemorrhoids comes down to general medication of some predisposing cause and local applications to relieve individual symptoms.—*Therapeutic Gazette.*

Three Cases of Acute Pyelitis in Infancy.—L. Emmett Holt (*Arch. of Ped.*). Acute pyelitis has been given but small space in pediatric literature. Most writers make the statement in a general way that acute pyelitis may accompany any of the infectious diseases, the eruptive fevers, diphtheria and malaria, but few clinical observations have been recorded.

Case I.—Male infant fourteen months old. With the exception of slight diarrhea had never been sick. Child suddenly became ill, and temperature was found to be 103.5°. Physical examination revealed nothing. Quinine was given, ten grains daily, but with no benefit. An unexplained fever continued for a week with the temperature ranging between 100° and 102°. Urine examined on the seventh day and pus found in large amount. The constitutional symptoms were only moderately severe. No evidence of kidney complication and case made a prompt recovery. There was nothing to suggest a local cause, such as traumatism or calculus, balanitis or urethritis.

Case II.—Female infant eight months old. While apparently in perfect health it was taken suddenly with a chill followed by a very high temperature. For twelve days the temperature was steadily high, touching 105° almost every day and only temporarily reduced by baths. Early administration of ten grains of quinine daily had no effect upon the symptoms. There was no evidence of local disease until the urine was examined on the eleventh day and found to contain a large amount of pus. With the administration of alkaline diuretics, and a great increase in the amount of urine and the discharge of pus, the temperature gradually fell, and after four days remained at the normal point. There was no suspicion of malaria, there was no evidence of vaginitis or cystitis. The occasional casts and renal epithelium indicated that the kidney participated in the inflammatory process in a slight degree, as the rapid recovery showed. The child presented no marked prostration in spite of the prolonged high temperature.

Case III.—Female child nine months old. Had been perfectly well until ten days before the present illness, when she had a mild attack of influenza. Child was taken suddenly with a severe chill. Under appropriate treatment reaction was established and temperature reached 104°. In a few hours all symptoms disappeared. Twelve hours later a second chill occurred similar to the first; this also disappeared in a few hours and left the patient apparently well.

On the third day two severe chills occurred, the temperature rising immediately after in one case to 105° and in the other to 104.5°. In three or four hours a fall occurred accompanied by a profuse perspiration. On the fourth day a specimen of urine was examined, and after standing a deposit of pus was found equal to about one-fifth of the entire volume of urine. Citrate of potassium was then given in large quantities. The amount of urine was increased but still contained a large amount of pus. Quinine was then given freely hypodermically. Previous to this the temperature ranged from 98.5° to 106°. From the time the quinine was begun the wide fluctuations ceased and there were no more chills, but in other respects patient seemed about the same for three weeks, when she began to improve. In three months she was declared well.

The exact etiology of this case is difficult of explanation. The effect of the quinine admits of two explanations. The first that there was a malarial element in the case, and second that the drug, eliminated in such a large amount by the kidney, had a marked antiseptic effect in the urinary tract. The latter seems more probable. In none of the cases reported was there any evidence of a local cause of the disease either of traumatism or of calculus. In none were there any previous or subsequent symptoms, pointing to disease of the kidney. In no case was there evidence of disease of the lower part of the urinary tract. The author calls attention to the necessity of the examination of the urine in infancy in all acute diseases with doubtful symptoms.

The Treatment of Ear-Disease by the General Practitioner. Randall writes from his personal experience in the *Polyclinic*. He says that the exploration of the nose and Eustachian tubes calls gen-

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erally for their cleansing, even when they seem little obstructed by collected secretions. This is usually best achieved with the atomizer, spraying an alkaline solution of the same specific gravity as the blood-serum. If denser than this it causes osmosis outward through the mucous membrane; if less dense, endosmosis; in each case with decided irritation. This can best be employed through the anterior nares, a "Magic No. 2 Atomizer," costing seventy-five cents, serving as well as any other form, and the hand atomizer seems almost better than the more elaborate apparatus. If the tip of the nose be pressed upward by the bent thumb, while the fingers are spread upon the forehead, the tip of the atomizer will find quite a secure rest wholly external to the nose, where it can deliver its spray in any desired direction, while there is no soiling of the instrument nor risk of injury if patient or surgeon make an unguarded movement. The bottle of the atomizer should be held between the thumb and index, the other three fingers sufficing to compress the bulb and give a practically continuous spray. Two or three pressures will generally carry the fluid back to the pharynx, and the patient can be directed to lean forward and clear the throat by spitting, while the fluid drains from the nose. The handkerchief should be but slightly used, and only after such removal of all fluid which might be forced up the Eustachian tubes.

At times the post nasal syringe forms a better means of cleansing, since the warmest fluid feels cool when sprayed; and, with a tractable patient, the measure is neither very difficult nor disagreeable. Either procedure should be followed by mopping of the vault of the pharynx to complete the cleansing, and generally to make an astringent medication of this most important tract. The visible lesions of the lower pharynx are generally secondary to the condition above, which especially concerns us in ear treatment. A slender cotton carrier, bent to a right angle twenty millimeters from the end, and armed with a pledget of cotton of appropriate size, should be dipped in the medicament (*e. g.*, two per cent, glycerole of iodine), squeezed free of excess, and carried in as the patient makes a loud inspiration, to turn quickly up behind the velum and sweep the tube-mouths and vault clear. A tongue-depressor is generally worse than useless,—in the way, rather than helpful, a great annoyance to the patient, and another instrument to demand cleansing, or to risk conveying contagion. A spray of albolene medicated with menthol camphor (two to five per cent) forms a good protective and mild stimulant to apply to the nares; and if inflammatory trouble is present, Randall finds dusting with calomel generally very efficient as a sedative, antiseptic alterative.

With the nares cleansed, we are ready for the inflation which is generally needed for exploration or treatment, but had better first study minutely the condition to be seen in the auditory meatus. Here we may find purulent matter requiring removal if furuncle of the canal or suppuration in the tympanum be present, and the use of the syringe may afford not only the best cleansing, but, by the heat of the water used (105° to 112° F.), be an excellent stimulant. The pain which is often present or elicited by manipulation yields as surely to heat thus applied as to any other means, and as this is effected by the tonic contraction of vessels and the absorption of exudate, its effect is curative as well as palliative. Drying should follow, and any clinging flakes of epidermis gently wiped away with the delicate cotton carrier armed with a wisp of absorbent cotton. If clean, the meatus should offer no impediment to the study of the drum head and the diagnosis of the affection and the institution of appropriate treatment. Inflation, if now practiced, should show its effect by blowing out additional secretion from a suppurating tympanum, manifesting, perhaps, a perforation previously ill seen, or it may distend the depressed drum head in a catarrhal case, and give relief to deafness and tinnitus previously present. In an ear apparently normal, it should serve to show normal patulency of the Eustachian tube,—a condition better proved than assumed.

For the inflation, the pear-shaped bag of Politzer is the appropriate instrument, connected by a few inches of rubber tubing with an olive nozzle. With this so held as to occlude one nostril and the other closed by pressure of the fingers, the bag is pressed as the patient swallows, says "huck," or blows out the cheeks, and the air prevented from escaping from the nares will generally force its way up to the ears. Slight pressure should be used at first, increased only if necessary.

Completion of the cleansing as perfectly as possible in the suppurating cases, with the aid of peroxide of hydrogen on the cotton pledgets and light dusting of the inflamed surfaces with impalpably powdered boric acid, completes the treatment of most of this type of cases; pneumatic massage of the drum head in the catarrhal cases; inunction with the yellow oxide of mercury cintment in the furuncle or the eczema cases,—surely this, with a few self-suggesting modifications, constitutes a routine of treatment that should be within the easy execution of every practitioner. Yet this is just what forms the bulk of the work of every aurist in his office as in his clinic, and the small remainder of cases is such as to tax his skill in diagnosis and treatment to the uttermost. These last can hardly be dealt with by the non-specialist.—*Therap. Gazette.*

The Duration of the Contagiousness of Diphtheria.—The *Journal des Practiciens* for January 19 contains an article in which the writer remarks that this question is the subject of much controversy. A young physician, M. Tezenas, recently collected sixty observations of patients who were attacked with characteristic diphtheria, and he divided these cases into three series, and made a bacteriological examination of the products taken from the bucco pharyngeal mucous membrane and from the nasal discharge. The following results were obtained:

In the first series, in forty-four cases, the mucous

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membrane did not present any false membranes and there was no nasal discharge. On bacteriological examination, the cultures showed no bacilli, except in three or four cases where Loeffler's bacillus disappears after four days.

In the second series, in five cases the mucous membrane was divested of its false membranes and the nasal discharge dried up. Nevertheless, Loeffler's bacillus persisted from twelve to twenty-eight days.

In the third series, in eleven cases the nasal discharge persisted, and the cultures with this discharge were positive, although those of the products drawn from the bucco-pharyngeal mucous membrane were negative. The presence of bacilli in the nasal discharge was ob served for from five to thirty-five days.

These facts, says the writer, lead to the following practical conclusions:

1. In a number of cases the metadiphtheritic contagiousness ceases with the disappearance of Loeffler's bacillus. Nevertheless, the irritated condition of the bucco-pharyngeal mucous membrane, under the influence of intercurrent measles, favors the increase of the bacilli and their presence in the mouth; hence the necessity of a bacteriological examination of the products taken from the mucous membrane of this cavity.

2. Not infrequently (in eleven cases out of sixty) Loeffler's bacillus disappears from the throat, but is still found in the nasal discharge. The trouble is thought to be common coryza, which is a mistake, as this discharge is not accompanied with any symptoms of classic coryza. There is no conjunctival injection, or headache, or watering of the eyes. Ordinarily it is unilateral. The discharge is a transparent mucus and by no means the sanious discharge which succeeds false membranes of the throat.

3. According to M. Tezenas, Loeffler's bacillus exists in the nasal cavities as long as the nasal discharge continues, and disappears when it does. He adds that when this discharge is absent there are no bacilli in the nose.

In practice, then, says the writer, this fact must be taken into consideration, that a nasal discharge the origin of which does not coincide with the disappearance of the false membranes is not diphtheritic. It does not contain Loeffler's bacillus. The bacteriological examination proves that unquestionably.—New York *Med. Jour.*

Causes of Many Common Ailments in Infancy and Childhood.—The causes of disease can usually be arranged in two classes, the exciting and the predisposing. The exciting causes of most acute diseases are minute vegetable organisms which find a lodgment in the tissues of the body, and there grow and multiply, dissolving the tissues and living on the nutrition thus obtained. In this process, poisonous substances known as ptomaines are formed, and being taken into the circulation by the absorbents, pass into the blood and poison the whole system, causing chills and fever, as well as the constitutional symptoms of all acute diseases.

The living tissues when in health are provided with structures which resist and destroy these disease-producing germs, and the surface of the skin and all the lining membranes, as that of the mouth, nose, throat, etc., have a protective covering of cells, which, when unbroken and healthy, shuts them out of the tissues. The healthy secretions of different glands, as the saliva, the gastric juice, the bile, etc., either destroy the germs outright, or prevent their growth and multiplication. The predisposing cause of disease is anything which cripples the action of these useful defenders of the body.

If a baby is given a wrong start in life by having the digestive organs deranged by improper food at its first meal, and the respiratory mucous surfaces congested by the chill of the first bath, the foundation is laid for disease of the digestive organs in after life, and a nasal catarrh is fastened on the baby, which, creeping slowly onward, will gradually involve the pharynx, or back part of the mouth and upper part of the throat, the ears and finally the windpipe and bronchial tubes. In cases of chronic catarrh, the nose and throat are always more or less sore, and, being covered with unhealthy discharges, they become fruitful fields for germ culture. The open wounds are so many avenues for germs to enter the tissues of the body, causing swollen glands, abscesses in the ears, erysipelas of the head and face, tonsillitis, quinsy, diphtheria, consumption, and pneumonia. Disease germs are always with us more or less, and we can only limit their power for evil by cutting off their chances of finding an easy entrance into the body, a suitable growing place, and suitable food.

The mucous surfaces of the nose, mouth, and throat can be easily inspected, and they should be kept clean and the surface disinfected. The hard crusts in an infant's nostrils should be removed by softening them with warm sweet oil or vaseline used on a cotton swab. Both before and after nursing, the baby's mouth should be washed with a saturated solution of boracic acid water, and kept free from congestion. Any ulcers or other broken surfaces should be disinfected at once, by washing with a solution of peroxide of hydrogen, one part in four of water, twice daily until healed. The throat should be gargled or swabbed with the boracic-acid solution or the peroxide, when it is irritated or looks sore and inflamed. A case of enlarged and ulcerated tonsils should be reported to the family physician; and all decaying teeth and sore, spongy gums should be given over to the care of the dentist, that the teeth may be either drawn or filled; not only the permanent, but the first teeth also should be treated.

The first processes of digestion take place in the mouth, and the saliva continues to digest starchy foods for half an hour or more after they enter the stomach. If the food enters this organ mingled with catarrhal discharges from the mouth and throat—as pus, blood, and other foul matter, instead of a healthy digestive

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fluid—we can easily conceive how the digestion must be disturbed, and how many kinds of disease germs may be introduced into the stomach. To keep the mouth, throat and nose clean, and their structures and secretions in a healthy condition, should be the aim of every nurse, mother, or any one having the care of children. And this needed protection from disease producing organisms can be secured only by intelligent vigilance and watchfulness.

Years ago, patients undergoing surgical operations and women during confinement died by the hundreds in all the hospitals of the great cities in this country and Europe. To-day these fatal results are practically unknown. These cases are under the charge of trained surgeons and nurses. But the matter of personal hygiene must be just as strictly studied and its principles applied in caring for young children, if we are ever to reduce the mortality and sickness resulting from lack of cleanliness and care during infancy and childhood.—*Good Health.*

SURGERY.

The Regression of Certain Goitres after Exposure of the Hypertrophied Thyreoid Body to Air.—The *Provience Medicale* for January 26, contains an article on this subject by M. L. Berard, who relates the following case which had come under M. Poncet's observation, and showed very plainly the favorable results that may be obtained with this treatment, which, he says, is easy for the surgeon to practice and painless for the patient: The patient, a young man without any previous history of disease, presented an enormous two-lobed goitre. The affection had shown itself four years before in a progressive increase in the size of the neck, and this had gone on imperceptibly since then, without any inflammatory attacks and without causing any serious functional troubles. However, for several months the patient had complained of dyspnea, which became more and more marked. At the examination it was ascertained that the general form of the neck was like that of the trunk of a cone very broad at the base. There was hypertrophy of the lateral lobes of the thyreoid body, which were represented by two pyriform masses from nine to ten centimetres in height, of a homogeneous consistence, and resisting pressure; there was no appearance of a hard core or of cystic points, and no notable increase of the median lobe. There did not seem to be any retrosternal prolongation. The skin over the tumor was free from adhesions, but the tumor, on the contrary, followed all the movements of the larynx. There was rhythmical swelling keeping time with the beating of the pulse, without true expansion. The external jugular was deviated to one side and slightly dilated; the anterior jugular was distinctly outlined, as well as the extensive anastomosis which united it to the external jugular. The vasculo nervous plexus of the neck was concealed behind the two hypertrophied masses and communicated its throbbing to them. The eyes were slightly brilliant, without exophthalmia; there was no palpitation, or tachycardia, or tumor, and the voice was goitrous. There was no myxedema or change in the character, and the conceptive faculties were intact. There was a slight puffiness of the face, with rather marked anemia. An examination of the urine showed nothing, and the general condition was good. The cervical circumference at the level of the most prominent part of the tumor (three centimetres above the sternal notch) was forty-two centimetres.

The patient was put under the influence of ether and a longitudinal median incision was made in the subhyoid region, involving all the soft parts as far as the capsule of the thyreoid. A fleshy goitre, furrowed with large veins, the network of which covered the anterior surface, was found. There was no outgrowths, only two lateral masses. After incision and reflection of the capsule, displacement to the outer side was attemped; but, whether because of the extreme softness of the trachea, or because of the presence of a retro-tracheal thyreoid ring, as soon as the right lobe crossed the lips of the incision, a suffocative attack was immediately produced. Dislocation of the other lobe only aggravating these symptoms, the physician contented himself with isolating the neighboring tissues on the edge of the tumor, which was put back in its former place and the wound left open under the dressing. All dyspnea disappeared. There was no hemorrhage at the time or afterward. At the end of forty-eight hours several clamps were removed and the dressing, which was saturated with a great deal of serosity, was changed. During the following day the patient complained of a sensation of tension about the wound, but he no longer felt any functional inconvenience.

Eleven days after the operation the neck was again measured and the circumference was found to be thirty-eight centimetres, a diminution of four centimetres. A month later the measurement was thirty-six centimetres and two weeks after that it had gone down to thirty-three centimetres. The wound where the incision had been made was almost completely cicatrized and the ugly shape of the neck was so very much modified that no trace of the deformity could be seen unless the shirt collar was much opened. Above all, the normal tone of the voice had returned, also the patient's ability to walk rapidly and even run without inducing palpatation and suffocation.

How, says the author, is this to be explained? No more than in the case of exothyreopexy it is possible to formulate a complete and logical theory. It is on observations, especially clinical, he says, of general atrophy of goitres after unimportant interventions involving the thyreoid body or the capsule that M. Jaboulay based his new method, and, according to him if some of them revert to a perverted state of sanguineous and lymphatic intraglandular and extraglandular exchange,

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we must take into consideration also purely trophic direct or reflex phenomena. M. Brown-Sequard had reported several experimental facts of sensitive and trophic disorders following excitation or an incision of the superficial soft parts of the neck.

But, says M. Berard, if the theory of the procedure is not yet sufficiently established, the same is not true of the indications Its aim is not to dethrone partial thyreoidectomy or exothyreopexy; as in the latter operation, exposure to air will be a valuable resource in numerous cases where radical intervention is rendered impossible or very hazardous because of the nature, the size, or the connection of the goitre.

In young patients the tumor is always buried in the network of enormous veins, without, however, threatening suffocation by downward retrosternal prolongation. This type of goitre may exemplify frequent conditions. It may spread on the surface in front of the laryngo-tracheal tract and on the vasculo-nervous plexus of the neck, and thus occasionally cause dyspnea on exertion and symptoms of irritation of the vagus and of the cervical sympathetic; or it may send a unilateral or bilateral prolongation behind the trachea, which often does not manifest itself by any serious symptoms in the ordinary conditions of life, but produces imminent suffocation on the least attempt at dislocation or of morcellement of the tumor.

Simple exposure to the air has, beyond all dispute, says M. Berard, the following advantages: Absolute harmlessness; complete absence of hemorrhage; preservation of the connection of the thyreoid body with the trachea; and finally, the possibility of effecting without the aid of general anesthesia, simple insensibility of the superficial surface with methyl chloride or with cocaine. Accidents with anesthesia are not the least of the complications in surgical intervention in cases of goitre.—N. Y. *Med Journ.*

NOTES AND ITEMS

The Calibre of the American Intestine.—In communicating to the Societe de Chirurgie the results of some experiments he had carried out on dogs with Murphy's anastomosis button, M. Chaput made a statement which seems to us to open up a field for speculation, if not for inquiry. Basing his opinion on numerous measurements of the human intestines, the distinguished French surgeon informed his audience that the 27 mm. button is far too bulky for the small gut in general, and especially for the lower end of the ileum. Of the three sizes he prefers that which is about equal to 21 mm. in diameter; it is the smallest and adapts itself to the situation more readily than the others. Now, the questions suggested by M. Chaput's remarks are these: Do American citizens, as a rule, possess more voluminous intestinal tracts than their French congeners, and, if so, how far is cookery responsible for the difference? It is, of course, notorious that French cooking is the best in the world; has this fact any bearing up the presumably small calibre of the French bowel! Digestion being made easy, so to speak, is it the case that a partial arrest of development has been the consequence? Is there also discrepancy as regards length between the *primae viae* of the two nationalities? Savages are endowed with magnificent mouth furniture, and dental decay is sometimes said to be a product of civilization dependent to a great extent upon knives and forks! Has the human race any reason to dread analogous deterioration as the corollary to elaborate cookery? Finally, and by way of closure to these *obiter dicta*, are dainty dishes a physiological mistake?—*Lancet.*

Cycling and Heart Disease.—Sir Benjamin Ward Richardson, in an address on this subject before the Medical Society of London, drew these nine conclusions:

1. Cycling, when carried on with moderation, in so far as the healthy heart is concerned, may be permitted or even recommended by practitioners of the healing art.

2. In all cases of heart disease it is not necessary to exclude cycling. It may even be useful in certain instances where the action of the heart is feeble, and where signs of fatty degeneration are found, since increased muscular exercise often improves the condition of muscle, and of no muscle more than the heart itself.

3. As the action of cycling tells directly upon the motion of the heart, the effect it produces on that organ is phenomenally and unexpectedly great in regard to the work it gets out of it.

4. The ultimate effect of severe cycling is to increase the size of the heart, to render it irritable and hyper sensitive to motion, the cycling acting upon it like a stimulant.

5. The over-development of the heart under the continued and extreme over action affects in turn the arterial resilience, modifies the natural blood-pressure, and favors degenerative structural change in the organs of the body generally.

6. A fact that has only been incidentally noticed in this paper is worthy of notice—namely, that in persons of timid and nervous natures (neurotics) the fear incidental to cycling, especially in crowded thoroughfares, is often creative of disturbance and palpitation of the heart, and ought to be taken account of as a piece of preventive advice.

7. In advising patients on the subject of cycling it is often more important to consider the peripheral condition of the circulation than the central. Enfeebled or worn out arteries may be more dangerous than the feeble heart, and, when connected with a heart that is over-active, are seats of danger. This same remark

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would, of course, apply to cases where there is local arterial injury, as in aneurism.

8. Venous enlargement seems rather to be benefited than injured by the cycling, and conditions marked by sluggish circulation through veins are often greatly relieved by the exercise.

9. There are three things which are most injurious in cycling—(*a*) straining to climb hills and to meet head-winds; (*b*) excessive fatigue; and (*c*) the process of exciting the heart and wearing it out sooner by alcoholic stimulants, and the omission of light, frequently repeated, and judiciously selected foods.

Lastly, the time has arrived when practitioners of medicine everywhere should make observations for themselves that confirm or confute these observations, and add to them so much more that I of necessity have omitted.

Dr. Ernest Sansom, in commenting on the above, referred to his oration on rapid heart, delivered before the Society, and said that he could only recall one instance in a cyclist, and he had met with no instance of irregular heart among riders. He thought the worst form of exertion was the running to catch a train, which produced both irregularity and rapidity of heart-beat. The influence of cycling was decidedly more in the direction of good than in that of evil. As a therapeutic agent in the treatment of actually existing heart disease it was quite in accord with the recommendation of Professor Hirtl, of Munich, who prescribed physical exercise; but he thought cycling had many advantages over climbing, which Professor Hirtl extolled. He looked upon the cycle as an important hygienic and therapeutic agent, and thought it was responsible indirectly for the immense moral improvement noticeable in the track and the era of the cycle.—*Medical Record.*

Transmission of the Infection of Typhoid Fever by Oysters.—In view of the recent epidemic of typhoid fever in Connecticut due to eating raw oysters the following cases, reported to the *British Medical Journal* by so careful an observer as Sir William Broadbent, deserve notice. Dr. Broadbent says: "I saw on November 12, 1894, with Dr. McCaskie, a young married lady who had been attended, a little more than a month previously, by Sir John Williams in her confinement. Up to the time of the attack, for which I was consulted, she had made a favorable recovery. The precautions against the communication of disease of any kind were more than usually careful. Milk and water were boiled, and the sanitary arrangements of the house were perfect. No other inhabitant of the house was ill in any way. In the course of her convalescence from the confinement she had oysters, and in about ten days later was attacked with typhoid fever of an unusually severe type, with early acute tympanites, which proved fatal. On December 6 I saw, with Dr. Benson, a young gentleman who, three weeks before, had had an attack of influenza. After subsidence of the fever he was kept in his room on account of bronchial catarrh. During this time he partook freely of oysters. The sanitary arrangements of the house were faultless; no other member of the household—a large one—suffered; no other source of the attack of typhoid fever from which he suffered could be traced. On November 27, I saw, with Mr. Manley Sims, a gentleman and his wife who had simultaneously been attacked with typhoid fever. The sanitary surroundings were irreproachable; no possible source of typhoid fever could be traced, except that a fortnight before they had partaken of oysters. The simultaneous attack was strong evidence of simultaneous exposure to the poison. One of these cases ran a somewhat severe course; the other, in respect of fever, was mild, but was attended with more than usual gastric catarrh. In the course of our attendance on these cases Mr. Manley Sims gave me particulars of an extremely severe attack of typhoid fever in a child, aged eight years. No other member of the household was affected, and no possible source of poisoning could be traced, until it was ascertained that shortly before the attack the child had eaten twelve oysters at the house of friends of the parents. On November 23 I saw a young married lady who, ten or fourteen days previously, had on two occasions had six oysters with a young married lady of about her own age, a cousin. She had a mild attack of typhoid fever, attended, however, with unusually severe gastric catarrh. Her cousin, who meantime had gone to Italy, also suffered from typhoid fever. On November 19, 1894, I saw, with Dr. English, two young men living in the same house, one being the brother-in-law of the other. The sanitary arrangements of the house were good. No other member of the household suffered. The two young men were engaged together in the City in irreproachable surroundings. They had simultaneously been taken ill with an unusually severe form of typhoid fever. One was moribund at the time of our first consultation; the other, after apparently recovering from the severe symptoms, of which acute tympanites was one, ultimately died of perforation. No cause for the disease could be discovered, except that after visiting a theater they had had an oyster supper together some ten days previous to the setting in of the symptoms. Early in December I was called in consultation into the country by Dr. Forster, of Daventry, to see a clergyman and his daughter, twelve years of age, both suffering from typhoid fever. The daughter had been attacked a few days before her father. Typhoid fever was an unknown disease in the neighborhood, the sanitary arrangements were those usually found in a large country house. Great attention had been paid to the ventilation of the drains and cess pit. No other member of the household was ill About a fortnight before the attack they had twice had oysters down from London, which had been eaten by the father and the little girl, no one else having partaken of them.

"Other cases, in which the evidence was equally convincing, have come to my knowledge, although the patients have not been under my care, and I have seen

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several cases of typhoid fever in gentlemen engaged in the City, their families at home not suffering. On inquiry it has been found that they frequently took oysters for lunch."—*Medical Record*.

The Plea of Hypnotic Influence in Criminal Cases.—The recent acquittal of a self-confessed homicide in Kansas on the plea of hypnotic influence, and the conviction by the same jury of his alleged hypnotizer, the raising the same defense in several other noted cases in different States, and its rapid adoption in other cases as reported in the daily press, all show that there is likely to be a comparatively new element frequently introduced into criminal practice in the immediate future. It is not absolutely new, since the same plea has been utilized on several occasions in Europe, and its dependencies, and it is only very recently that its successful employment in a case not involving life, in Bavaria, has been reported. The precedents have therefore been set, and there is little doubt but that the plea will be brought up rather frequently for, at least, a certain time in the immediate future.

The subject of hypnotism is one in regard to which there is a certain difference of opinion among physicians, and this, by itself, will tend to increase its popularity. The divergencies of opinion, moreover, apply more or less directly to the medico-legal questions involved, more especially to the possibility of crime by what is called "post-hypnotic suggestion."

There is no doubt but that criminal acts may be committed by persons in a condition of somnambulism, and the resemblance of the hypnotic trance condition to somnambulism is very close in many respects, so much so that it may be considered as a sort of induced or artificially provoked somnambulism. It may, perhaps, be admitted as a possibility, therefore, that crimes may be provoked in the hypnotic subject in the actual condition of trance, though in many cases and probably in the vast majority this would be impossible. Indeed, it is denied by some good authorities that this could occur with an individual of good moral tendencies, with no predisposition or inclination to criminality. The higher moral inhibitions existing in their moral intensity in the waking state would in all probability still be somewhat active even in the hypnotic condition. The experiments reported that would seem to indicate the contrary are not conclusive, as they do not realize the actual conditions. The subject has a certain consciousness that the part he is acting is not real, and where this has been absent it has been found that criminal suggestions fail. It would be a very bold and criminal hypnotizer who would suggest an actual crime if he thought there was any danger of its being carried out. Of course any actual criminal inclination on the part of the subject would alter the case, and would also materially affect the question of his responsibility. Simply immoral or improper acts might also be done under suggestion by those who would refuse to commit actual crimes. Any strong natural propensity, the sexual impulse for example, might be stimulated, and thus sexual improprieties or crimes might be more likely to be committed or submitted to, than other forms of misdeeds. Gilles de la Tourette had, in 1890, collected the reports of five cases of rape committed on persons in the hypnotic state, and other cases have probably since been reported. There is more danger of hypnotic subjects suffering from crimes against the person than there is of their actually committing them.

It is not probable that the hypnotic trance condition will often be alleged in the plea of hypnotic influence as a defense for crime. It would make the operator an actual participant and he might as well be guilty of the deed himself. What is called "post hypnotic suggestion" is the plea, as we understand, in the cases referred to in the beginning of this article; the suggestion is given to the subject in the trance state, and at a certain time, after he has been apparently long in his normal walking state, he is irresistibly impelled to commit the criminal act. It is a common opinion with uninstructed persons, by whom hypnotism is supposed to be a mysterious force emanating from the operator and subject to his will, that he has simply to wish his victim to do this or that act to have it done. This it ought to be needless to say, is an error; in every case the suggestion must be given or implied by word or act. Whether the suggestion is direct and immediate or applies to the commission of the acts at a future time, it is the same; it must always precede the performance.

According to Bernheim and the other leaders of what is called the Nancy school of hypnotists, it is possible to so make the suggestions that the actor may have no recollection of it or of the act. The dangerous consequences of this fact, if it is a fact, will be obvious to any one. A man might thus suggest a crime and secure himself absolutely from detection, or at least make it very difficult to trace to him the responsibility. Those who hold this view, however, are comparatively few in number; the balance of scientific authority is decidedly opposed to them. Some, even, of the followers of Bernheim, especially in this country, are decidedly opposed to his views in this regard. So far, moreover, no such instance has ever been proven, and experiments that have been made do not favor its probability.

It is a curious fact that the subjects of post hypnotic suggestion will sometimes give specious reasons for the acts they perform, a phenomenon which I believe can be best accounted for by assuming that they have a recognition of the absurdity, and desire to explain it away. Post-hypnotic suggestion is really auto-suggestion. The subject has a belief that he must perform the act and therefore does it. If this belief is disturbed, the act is not performed, and this has been well shown by the fact that good hypnotic subjects can be spoiled for an exhibitor's purposes by merely explaining to them the medical theory of the condition. In a vast majority of cases, if not in all, the efficiency of post-hypnotic suggestion depends entirely upon the belief of the subject in some mysterious power exercised over

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him by the operator. If moral impulses are strong, there is very little probability of its being effective for evil, it is, at its best, not equal to the profounder sentiments of our nature.

As a plea in criminal cases, it should be especially distrusted, and the benefit of any reasonable doubt ought to be given to the party accused of instigating the crime. This would necessarily exclude the plea since reasonable doubt in one case naturally destroys it in the other, and the most it could benefit a confessed criminal would be to raise a doubt as to his responsibility. The Kansas jury exactly reversed the rational procedure, and the verdict was therefore justly set aside in the case of the man convicted. The greatest danger of the plea of hypnotism in criminal cases, if it is to become a popular or frequent one, is that of false accusation, and the escape of an occasional criminal is an unimportant miscarriage of justice when compared to that of the conviction of an innocent individual.

The value of hypnotism for purposes of obtaining testimony or ascertaining the truth is also very dubious. So far as it has been tested by competent observers the results are negative, and any confessions or admissions made by hypnotized persons ought to be legally excluded. When an individual is fully in the hypnotic condition he can be made to say anything, and even honest questioning may act as false suggestion. It is easy to see, moreover, what would be the possibilities of post-hypnotic suggestion in this regard.

I have endeavored to give in the foregoing the substance of the best medical opinion on the medico-legal bearings of hypnotism. It may be admitted as possible that criminal acts may be successfully suggested in the condition of hypnotic trance, though this is denied absolutely by many good authorities, in case of persons with proper tendencies and impulses. It may be considered as extremely improbable in such cases.

The successful post hypnotic suggestion of crime is still more dubious, and is fully believed in by but comparatively small proportion of those who have written upon and considered the subject. As a plea in criminal cases, post-hypnotic suggestions should always be distrusted and the benefit of any doubt should be given to the party accused of making the suggestion, rather than to an admitted transgressor. Reasonable doubts in these two cases are mutually exclusive One of the greatest dangers of the admission of this plea is that of false accusation of innocent individuals.

The testimony of persons in the hypnotic state is vitiated by their condition and should by itself alone have no legal value.

Susceptibility to suggestion, even to the extent of affecting bodily functions, does not necessarily imply the hypnotic condition, though the difference is to some extent one of degree only. This must be remembered in considering or estimating the value of testimony; otherwise we would have to, more or less, reject all testimony, except expert testimony, as was claimed by the late Dr. Beard in a noteworthy rticle n this subject. Every one is more or less susceptible to suggestion, but not every one is hypnotizable. The fully developed hypnotic state, implying a marked disturbance of consciousness and the personality, is an abnormal one and may have serious physical results on the subject Conditions distantly related to or approaching it, but within physiological limits that may be manifested by any one, ought not to be called hypnotism, or at least for legal purposes, should be clearly distinguished from it.—H. Bannister, M.D., in *Chicago Legal News*.

Franklin's Air Bath.—Oxygen is the great natural purifier. Oxidation means purification; when an abundances of oxygen is allowed access to anything that is foul, in the sight of nature, it is only a question of time until that which has been naturally foul becomes naturally pure.

This is not only true of the interior of the body, but it applies equally as well to the exterior.

Have any of our readers ever stopped to reflect how infinitesimally small is the amount of air that will get access to the skin even during the longest lifetime; night and morning one set of clothing is hurriedly changed from the other, lest the contact of a little air with the body might produce "a cold."

Has not nature plainly indicated by the way in which she sends humanity into the world that it is her wish that the air should have access to the surface of the body?

It certainly would be just as easy for nature to start our little babies on their journey through life fully dressed in the wool of the sheep as it is for her to envelop them in their own skin, but it is part of her design that this skin shall serve merely as a covering to the organs and parts beneath; to finish and perfect the beauty of humanity, and to serve a most important organ in the maintenance of healthy life.

It must be ever remembered that the skin is one of the great scavengers of the human body, removing therefrom through its agency great quantities of dead and decaying organic matter that has played its part in the drama of life; and it will be noted that if the garbage carts of a city are not periodically cleansed, they surely will become very foul and offensive to both sight and smell; that which happens to the cart of wood and iron will also happen to the delicate skin.

To the physiologist the skin of an unclean person is the most disgustingly filthy object conceivable, and we are sorry to say that the skin of most human beings is so filthy, to believe which it will be only necessary for a person whose olfactory nerves are but moderately sensitive to enter a crowded assemblage of average individuals on a damp, murky day, when doors and windows are closed.

These few words have been written to demonstrate to those not already alive to the fact that a clean skin is a most necessary condition of health.

Many persons who bathe regularly in water have not yet heard of "Franklin's air bath," or if they have, are

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certainly not alive to its importance. We would strongly urge the practice of this most valuable habit upon all, but in an especial manner do we commend it to mothers for their young children.

If after seeing that the nursery is comfortably warmed to say 70° or 75° F., you will strip the little ones and allow them to play and romp and pose as "naked truths" for one or two hours daily, you will find that not only will this most important organ—the skin—be kept clean and pure and active, but also that the liability of the child to "take cold" will be greatly lessened. —*Annals of Hygiene.*

Medical Association of Missouri.—The thirty-eighth annual session of the Medical Association of Missouri will be held in Hannibal, May, 21, 22, and 23, 1895. Titles of papers to be read must be sent to J. H. Duncan, Room 409, Union Trust Building, St. Louis, Mo., before May 1, 1895.

J. C. Mulhall,
A. L. Fulton,
J. H. Duncan,
Committee on Scientific Communications.

Finding the Upper End of a Divided Tendon.—Felizet (*Bull. et Mem. de la Soc. de Chir.*) in cases in which the tendons are divided, whether at the wrist or hand, advises that the two adjoining fingers be fully extended. This will being the upper end of the divided tendon into view, and thus enable it to be seized. The affected finger is then flexed, and thus the lower end of the divided tendon is brought up and the two ends are sutured with catgut. In order to prevent too much strain on the catgut sutures, the upper end of the divided tendon, a full centimeter above the point of division, is sewed fast with catgut to the adjoining healthy tendon. In treating the case afterwards the unaffected fingers are kept in a state of extension, while the affected finger is kept in a state of flexion. This position is to be maintained by means of a plaster dressing.—*Atlanta Medical and Surgical Journal.*

Discovery of the "Missing Link."—Dr. Eugene Dubois, a Dutch army surgeon at Batavia, announces the discovery of what he calls the *Pithecanthropus Erectus*—a supposed intermediate type between the apes and man. This discovery, according to *Le Progres Medical*, has aroused intense enthusiasm in the scientific circles of Europe and, if confirmed, will demolish the anti-Darwinists. M. Dubois found the remains in the lower quaternary of Sumatra. They consist of a well-preserved skull, a femur and a tooth; the two latter were found a few feet away from the skull. The cranium is intermediate between those of the anthropoid apes and of the native Australians. It has the characteristics of the celebrated Neanderthal skull exaggerated, with its enormous orbital ridges. The cranium is 185 ctm. long, 130 broad, and has a capacity of about 900 to 1000 cubic centimeters—a capacity much larger than that of the gorilla, but inferior to that of primitive man. This capacity is found only among imbeciles in man. The tooth, which was the third upper molar on the right, was enormous and resembled one from an ape more than a human tooth. The position of the foramen magnum and the posterior aspect of the skull show it was more nearly perpendicular than in any anthropoid. The gibbon, of all the apes, walks the most easily, yet it is much more differentiated from man than is this skull. We may conclude then that this man monkey was adapted for walking and a study of the femur confirms this. Dr. D. G. Brinton, in a letter to *Science* says: "One of the bearings of this discovery is upon the original birthplace of the human race. The author believes that the steps in the immediate genealogy of our species were these: *Prothylobates, Anthropopithecus Sivalensis, Pithecanthropus erectus* and *homo sapiens*. This series takes us to the Indian faunal province and to the other aspects of the great Himalayan chain, as the region somewhere in which our specific division of the great organic chain first came into being."—*Journ. Am. Med. Ass'n.*

The Climactric, or Change of Life.—Every woman lives in dread of the time when her normal functions will become irregular, or cease altogether. The change of life is a serious crisis in a woman's existence.

Dr. Hammond's discovery of the value of Animal Extracts in the treatment of this condition is a decided advance in modern scientific therapeutics. The Animal extracts, more particularly Cerebrine and Ovarine are peculiarly useful in the treatment of the diseases of women. They are best employed alternately, beginning one week with Cerebrine and the next week with Ovarine. The recuperative action of Cerebrine upon the nervous system has been successfully employed in many cases.

A Substitute for Morphia.—Silas T. Yount, Professor Nervous and Mental Disease, Clinical College of Medicine and Specialty Hospital; Professor Nervous Diseases, Chicago Post-Graduate Medical School, etc., writes:

"Febrinol (Fuller & Fuller Co.) is a safe and perfect substitute for morphia. In the distress occasioned by la grippe it is particularly useful, relieving the pain at once, keeping the patient comfortable and shortening the attack. No 'drug habit' or bad effects follow its use.

"In neuralgia, rheumatism, dysmenorrhea and all painful nervous conditions, Febrinol gives more and quicker relief than any other remedy."

I have used Dr. Marshall's Patent Convertible Saddle-Bags and Hand Case for some months past and consider them superior to any buggy case or saddle-bags manufactured. Had I hunted the United States over I could have found nothing else to suit the purposes so well. It is neat, beautiful, durable and compact. Its internal arrangement is also perfection. It should be adopted by every busy practitioner, and all other saddle-bags and cases on his hands consigned to the garret, and with a feeling of gain by the change, since with Marshall's Case you can be fully equipped to attend and meet all emergencies with the least possible delay. I prophesy its extreme popularity when and wherever introduced to the profession.

Oscar Ardery, M.D.

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ORIGINAL ARTICLES

Some Points Pertaining to the Present Pathologic and Therapeutic Status of Diphtheria.

BY I. N. LOVE, M.D., ST. LOUIS, MO.

Read before the St. Louis Medical Society, March 2, 1895.

It will be admitted that until recently the management of diphtheria, as well as that of many other diseases, has been empirical on the part of the medical profession. Since the cause of this disease has seemed to be definitely established, we have been able to work more intelligently in our treatment. It must not be forgotten, however, that able men in the profession do not yet accept the germ theory of disease. Among the number, so great a man as Dr. Lawson Tait affirms his disbelief. He is of the opinion that these organisms abound and multiply under two conditions or states, decomposition and disease. He thinks their presence is incident to, but not causative of, disease. To illustrate his idea, he presents the homely illustration of the dead horse under the mid-summer sun. The prolific devel opment of tissue destroyers, in the form of maggots, from microscopic parasites, does not demonstrate to him that the maggots had anything to do with the death of the animal, but that the vitality of the latter having been reduced to zero, the maggots, germs and spores utilize the opportunity for vital development upon their own part. He, with others, believes that the various organisms operating under the conditions of disease and decomposition, attempt to act as scavengers for the removal of effete material and perverted secretions and excretions, rather than as the causes of morbid conditions. Discussing this subject before the Birmingham Midland branch of the British Medical Association last October, Mr. Tait threw hot shot against the germists by citing the difference of opinion among dermatologists regarding the parasitic origin of eczema; he quotes many of their best observers who believe that it is of neurotic origin and that microbes have nothing to do with it. He aptly says that if we cannot settle upon the germ as being the cause of a disease so superficial, so exposed to view, so universal and so open to study as eczema, that there are few cases where it is capable of settlement. We can, many of us, sympathize with Tait when he says:

"I entered my college career just as the grand sweep of the cellular pathology was careering over the medical world. Everybody was mad after a new cell. Our microscopes had got so far as to unriddle the facts of cellular pathology which was to explain everything. Two parties existed and, of course, they fought bitterly, the only real and permanent effect being that the unhappy medical student had to meet two sets of medical examiners and to know two sets of answers to the same questions, the one to be given as the wind blew from the East, the other as the turn of the west wind came. The cellular party apparently triumphed, but it has silently and mysteriously disappeared, so that we may ask with Hans Breitman, 'Where is dad barty now?'"

In his paper, Tait refers to a contribution of Dr. Leslie Roberts, in a recent number of the *British Medical Journal*, on the pathology of vegetable hair parasites, and remarks that it interested him greatly, because it was a phase of the dermatological investigation getting as near the laboratory flasks as seems possible. Tait makes a note of the lack of unity of opinion on the part of dermatologists with reference to the pathology of vegetable hair parasites. He suggests that, from a bacteriological standpoint, they are no further advanced than botanists were in the time of Gussieu and Linnaeus, and that the philosophical revolution effected by Darwin has not yet reached them, and refers sarcastically to the amount of drivel that is made to center around the culture tube. He very tersely says: "What should we say if an investigator proceeded to classify the trees in an orchard by the shape of their branches or the color displayed by their fruit." He says logic cannot change with the size of the objects or with the apparatus and manipulation. He decries the rapidly appearing successive memoirs, which are self-contradictory and which are objectionable and unusual in scientific research, and suggest to us all the necessity of reserving judgment. Indeed, he says, many of the opinions maintained so strongly regarding bacteria have passed into medical currency with very little inquiry on the part of those who have received them. He says their work is carried on without regard to the first principles

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of Bacon, and with an utter disregard to the teachings and examples of Darwin. The very fundamental thoughts of the evolutionary school of biology are brushed aside, and the great text book of Sach's might as well have never been written.

Tait criticizes the application of Pasteur's law, which he so wonderfully illustrated in the process of brewing and wine fermentation, which were of such enormous financial value to the interests involved, as not being applicable to the human body, and says that Pasteur was responsible for leading wildly astray many young doctors, who had never studied Bacon, and who were incapable of grasping the fact that whilst the former might be wholly right in the brewing vat, it required a re-arrangement of the syllogism to carry the argument to the human body. For instance, take ten thousand human bodies all perfectly alike, as far as we can see, and drop your germs of typhus about and see what will happen. The first remarkable fact to be found is that if the bodies are in Birmingham there will probably be no effect at all. If they are in Edinburgh no effect, or very little, will be seen in the new town; whereas, in the old town some commotion will result and there will be about a hundred cases of typhus. These will be distributed in various centers with mathematical proportion, and probably no two cases will be exactly alike. Clearly, then, according to Bacon, the provocative cause lies not in the germs.

We cannot ignore some of the bacteriologic perplexities which confront us, however loyal we may be to the germ theory.

1. Pneumococci may exist in the air passages without producing pneumonia.

2. The bacilli coli (which are constantly at home in large numbers in the large bowel) are believed, by some, to be essentially the same as the typhoid fever bacillus of Eberth, and to develop the same biologic and pathogenic characteristics when the soil is favorable. Indeed, it is freely stated that the Klebs Loeffler bacillus is often found among the many scores of bacteria infesting apparently healthy mouths.

In a recent paper Bleyer says: "To-day we know almost to a certainty that there are two forms of diphtheria, which, to the eye of the clinical observer, present similar changes in the mucous membrane, inasmuch as both are characterized by the appearance of a pseudo membrane, at times dirty white, often tinted greenish, or yellow-white in color. Viewed at the bed-side alone, you will observe in both, prostration, a febrile condition, swelling of the sub-maxillary glands, disturbance of respiration (often slight, it is true); so that a differential diagnosis, clinically, is a qualification to which few of us can lay claim. Notwithstanding this, the two are totally dissimilar. Examined bacteriologically, the exudate of one will reveal nests of bacilli which are found only in the exudate of true diphtheria, while in the other there are no bacilli, but instead, the so called staphylo- and streptococci. The first variety is highly fatal, statistics showing a mortality of almost fifty per cent, while the second, so far as danger to life is concerned, is comparatively harmless In this latter statement he is wrong, for even these cases may produce fatal blood poisoning.

Skigo reports several cases which he met with during an epidemic of diphtheria, where the tonsils were covered with disseminated spots of exudate the size of a pea, and he tells us that there was absolutely no clinical indication by which he could differentiate the cases which ran the violent course of true diphtheria, and those which took the milder course.

Norton examined two hundred cases of diphtheria that had been diagnosticated by that eminent clinician, Simon, of Paris, and found in only one hundred and thirty seven of these the Klebs-Loeffler bacilli; forty-three of the remaining sixty-three cases proved to be tonsillitis; thirteen proved to be croup, of which twelve got well without operation; seven cases proved to be diphtheria with croup, six of which developed the bacilli after the operation of tracheotomy had been performed, and which, Morton says, had been due to hospital infection.

In recent investigations, made by Park in the New York Orthopedic Hospital, where the children seem especially liable to attacks of follicular tonsillitis and enlarged tonsils, culture experiments were made, and in some instances pure cultures of the Klebs-Loeffler bacillus were found in fair abundance, and in others they were scanty. Though the soil was favorable, the bacilli found were evidently not of a virulent character; and from these reports, Chappell, in the New York *Medical Record*, observes that until these cases were examined he had supposed that Klebs-Loeffler bacillus found in a sore throat meant diphtheria, whether the clinical history and evidence supported that diagnosis or not. He concludes that at the present writing it seems that there are three possibilities:

1. Clinical phenomena of diphtheria without Klebs-Loeffler bacilli.

2. Clinical phenomena of diphtheria with Klebs-Loeffler bacilli.

3. Klebs-Loeffler bacilli without any clinical phenomena of diphtheria.

If it be true that diseases attended with the formation of the pseudo-membrane of the throat, due to other causes than the Klebs Loeffler bacillus, are not followed by the well known sequelæ of diphtheria, then the term diphtheria should not be applied to them. The term diphtheritic has, in the past, been freely applied to this form, but I think it is a misnomer. The name diphtheroid, which, I believe, was first applied by Dr. Lester Hall, of Kansas City, is much more appropriate, as it expressesses the thought that the disease is like diphtheria.

It is said that there is no germ that is so variable in its virulence as the Klebs-Loeffler bacillus, (but all forms of life vary in their degree of lustiness) and this may account to some extent for the difference in severity in cases of diphtheria; but we are all aware of the fact

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that there is a great variation in the virulence of all epidemics; whether it be due to atmospheric or other causes has not been fully established.

Another element of confusion to the general practical physician, is the statement that the pseudo-bacillus found in diphtheria does not vary in any way microscopically from the true Klebs Loeffler bacillus. If this bacillus and others may vary so materially in their lustiness, in their ability to make their way into the world from time to time, may they not also vary in their general appearances to a like degree, and thus create confusion as regards microscopical diagnosis.

In a recent discussion, Dr. C. H. Johnson, of Grand Rapids, Michigan, says he can see no good reason for considering these so called pseudo-bacilli as other than true diphtheritic germs, which, if planted on suitable soil, may give rise to the most severe forms of diphtheria. The many conflicting facts presenting themselves to us, may, (if they do not prompt us to ask ourselves pathologically, "where are we at?") at least, make us hesitate in insisting upon the making of a diagnosis based only upon the microscopical demonstrations. Indeed, in spite of the brilliant light which has been thrown upon the subject from the intellectual lamps of many of the best men of the profession the world over, there is reason for our not being entirely absorbed in our study of diphtheria, as well as other diseases, by the microscopic and bacteriologic evidence to the exclusion of the bedside clinical evidence. While, personally, I am disposed to accept the germ theory, particularly as applied to the infectious diseases and probably to far more than have been discovered, I still believe most firmly that there are many diseased conditions dependent upon other things than germs, and that clinical facts are stubborn things.

Every true physician never ceases to be a medical student, and he needs to guard himself against too readily accepting the dictum of those whom he may recognize as the masters of the profession. The views of Lawson Tait, and the many other able workers of the medical world, are worthy of consideration, worthy of being weighed in the balance. I have great respect for the opinion of any man who has given evidence of being an earnest, honest student in science, no matter what his views may be. Our own Dr. William Johnson, one of the Nestors of the medical profession of St. Louis, one of the most indefatigable delvers in the field of literature, medical and general, when he antagonizes the germ theory of disease, we must remember, is in good company, and his views are worthy of our most profound consideration. At the same time, the younger workers in the scientific vineyard, who spend most of their time looking into the small end of a microscope and into the depths of test tubes, mingling with laboratorial outfits, should have a care lest they develop an intellectual myopia which will preclude their appreciation of the importance of bedside observation of clinical evidence. They should, each and every one, remember that bacteriology is not all of the science of medicine, and that the bulk of medicine is art rather than science; and, other things being equal, the careful student of human nature, the close observer and the energetic worker in the sick room, after years of experience, is often far more competent to make a diagnosis of a given disease by clinical evidence alone than they, with their microscopes and culture tubes, without such knowledge and experience. We who have listened to the able and forceful words of a venerable teacher of surgery in St. Louis, his teachings based upon knowledge gained from reading, not only books, but the symptoms of disease, would as soon accept his dictum with reference to a tumor, its benignancy or malignancy, its necessity for removal, as the most expert microscopical opinion taken alone. Any physician of experience worthy of the name, can make a diagnosis of pulmonary tuberculosis on the clinical evidence alone, and bring the microscope to his aid only for confirmatory purposes. But the true physician is ever receptive and unprejudiced, whether in the sick room or in the laboratory; he who knows it all, generally knows very little.

Like syphilis, diphtheria is probably primarily local, as it can be inoculated upon a denuded surface; but like syphilis, general in its effects, it so promptly affects the system at large that the removal of the infected point, by the cauterization of the membrane in the one case or the excision of the primary chancre in the other, will not prevent constitutional systemic poisoning. Time was when, in an empirical way, physicians immediately attacked these exudates in the air passages with violent caustics, often doing greater injury to the surrounding parts than to the invading membrane.

As syphilis has been in modern times greatly modified and its asperities softened by the recognition of the importance of local cleanliness and the securement of favorable constitutional conditions, so I believe may diphtheria. A suitable soil with depressed constitutional conditions—in other words, a dirty, suppurating, neglected angina (as in scarlet fever, acute tonsillitis or quinsy)—with perverted secretions throughout the alimentary canal, an already existing blood poisoning produced by the numerous streptococci and staphylococci present in the faucial field, presents conditions favorable to the development of the most brutal and lusty Klebs-Loeffler bacilli imaginable.

One should hesitate long before relinquishing many of the valuable measures which have stood the test of time, and accepting the newer therapeutic suggestions, even including that of Behring—for he undoubtedly originated and developed the antitoxine treatment of diphtheria. Roux, who is a skilled bacteriologist and presented remarkable results in a definite manner at the International Congress of Hygiene at Buda Pesth last summer, freely accords the credit of this discovery to Behring. The literature that has been presented during the last few months in favor of the serum therapy as applied to diphtheria, is enormous, and no candid, careful observer can ignore the fact that the great bulk of it is favorable.

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Nearly a hundred years ago Edward Jenner presented to the world the original thought in the direction of treating disease in man by a product from a lower animal which had previously been acted upon by the same disease. Jenner's application of vaccination for small pox was the first move in the direction of the blood serum therapy, for we have no reason to doubt that vaccinia on the udder of the cow is probably primarily the result of small-pox introduced into the same animal. It is true that the workers in this field are now moving along scientific lines and not empirically as did Jenner, and yet he stands an example to all scientists, whether they be bacteriologists or bedside physicians, illustrating the thought that the study of symptoms, the grasping of facts, their application, clinical work is, after all, one of the best means of demonstration in the hands of the physician. It will be remembered, too, that Jenner did not publish his work to the world until he had elaborated it, perfected it, and it extended over a period of twenty-five years.

The best report of the antitoxine treatment of diphtheria has been through the medium of the United States Marine Hospital Service. Surgeon-General Walter Wyman having delegated Surgeon J. J. Kinyoun, a skilled bacteriologist, to visit the Pasteur Institute and thoroughly study the work of Prof. E. M. Roux, he presents his official report in the weekly abstract published by the Marine Hospital Service under date of October 20, 1894; and it is, indeed, the most succinct and reliable article upon this subject that has yet appeared. Too great credit cannot be given Surgeon-General Wyman and his subordinate, Dr. Kinyoun, for the report. The essence of the conclusion made by Dr. Kinyoun, is contained in the following: "The results obtained by Prof. Roux in the treatment of cases of diphtheria are so astounding, that one is almost compelled to ask one's self, 'Is this possible?' But when the methods are known and the array of statistics is given, there can hardly remain a trace of doubt. The future possibilities in this direction can not be overestimated, as we have in the serum the almost absolute preventive of epidemics of diphtheria."

The great Virchow was, for a time, opposed to this method, but in a recent meeting of the Berlin Medical Society, he publicly announced that he had to yield to the brute force of unanswerable facts. A full opportunity was furnished for the comparison of results in a large number of cases in Berlin, when treated with and without the blood serum. Hansemann, Virchow's assistant, still opposes the blood serum, but as yet there has been no presentment of facts upon which to base his opposition; at least, it has escaped my observation. The reports from London, France, Berlin and upon this side of the water, are in the affirmative. The government of France has given to Roux its highest honors in recognition of his work.

And now, what shall be said of the present application of the blood serum therapy. First of all, the remedy is enormously expensive. The animal best adapted for its development is the horse, and the time required is not less than six months. This practically places it beyond the reach of the great masses. If the serum treatment is to become general, then comes the important question—and it is a difficult one—what arrangements are to be made for providing the community under sufficient and proper guarantee with the material for this treatment. Surely the same arguments would apply for this prophylactic measure (for such it is, as well as a remedial agent), being placed under the control of local boards of health, the same as in vaccination for small-pox. It is to be supposed that Health Boards have definite knowledge and supervision of the vaccine farms which furnish vaccine virus to the respective communities; and so they should have similar supervision over the laboratories where the blood serum is developed. The Health Boards should know that properly healthy animals are secured, those of proper age, and that the proper sanitary and antiseptic precautions are exercised in the establishment. Even granting that the blood serum therapy has proven its case, until it is available, and even after, we must not lose sight of other remedies which have, after long service, proved of value; for there can be no doubt that, considering the fact that the antitoxine antagonizes only the Klebs-Loeffler bacillus and not the streptococcus and staphylococcus and other pyogenic micro-organisms, we are never safe in ignoring our old therapeutic friends in favor of the exclusive use of the new. Reviewing the amount of confusion that exists, even among bacteriologists, regarding the definite cause of diphtheria and the different kinds of diphtheria; and the like confusion and uncertainty pertaining to the blood serum therapy, and our ability to make it applicable to mixed infections, we are justified in exercise of the extremest caution in its application.

Diphtheria poison is tenacious of life and may be transported indefinite distances. The disease is always more or less present in crowded communities, possibly permanently inhabiting the sewerage system of cities. Laboratorically demonstrated the Klebs-Loeffler bacillus is admitted to be frequently found in seemingly healthy mouths. A large number of the children in every community at certain seasons of the year, through the medium of follicular tonsillitis, enlarged tonsils, catarrhal disturbances of the air passages and scarlet fever angina, present themselves as standing invitations to diphtheria. A bacteriological demonstration of true diphtheria requires twenty-four or forty-eight hours. Remembering all these facts, every case of sore throat should be isolated and treated as a suspect. While in no case acting as an alarmist, the physician should be a guarder and a protector of his patients, and should from the beginning, inform the family of the possibilities of any sore throat developing into diphtheria.

The foregoing being true in every case of sore throat, the treatment from the start should be antagonistic to diphtheria; local and constitutional, no matter whether the Klebs-Loeffler bacillus should be suspected or dis-

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covered. Every case of suspected sore throat should be treated in a cleanly way and every hygienic rule should be observed. The ideal treatment for tonsillitis, the angina of scarlet fever and la grippe, which may be classed under the head of suspects, is a favorable preliminary treatment for any case of diphtheria; and this is, briefly, a prompt purging of the patient, emptying the intestinal canal for future service as a food tract; the administration of local applications, which serve as soothers and cleansers for the disturbed mucous membranes and are as nearly germicides as can be made. Under this head comes hydrozone and pyrozone, which are definite strengths of peroxide of hydrogen, and if too irritating may be diluted one-half. This application should be followed by listerine, pasteurine or katharmon, applied preferably with a hard rubber syringe, the nozzle of the same guarded by a piece of soft rubber tubing, two or three inches long, to protect the throat from being wounded. The keeping of the nasal passages well open by means of liquid albolene (five grains of carbolic acid to every ounce) protects the mucous surfaces and renders the infection at these points less probable. The internal administration (from the beginning) of benzoate of soda, in doses ranging from five to twenty grains well diluted with plain water every one or two hours according to the age of the patient, serves as a stimulator of secretions and is the best remedy for prompt reduction of a benign inflammation of the tonsils, it being equally valuable in the removal of exudations. A dry engorged condition of the mucous membranes with all secretions presenting a tenacity and a disposition to stick to the surfaces, is soon changed under the saturating doses of the benzoate of soda, into a loosening of all exudations and a moist condition of all the surfaces. A flow of mucous from the parts is stimulated, and exosmosis rather than endosmosis is encouraged. Salkowski, in 1879, announced that saturated solutions of the benzoate of soda rendered the diphtheria membranes, if bathed in them, absolutely inert; so that the remedy is more or less locally antiseptic. In addition to the remedy suggested, the bichloride of mercury should be given from the beginning; commencing with one-fiftieth of a grain, or even one thirty-second well diluted, to a child of two years, and increasing in proportion to the age, for at least twenty-four hours; the same dose to be continued every two or three hours thereafter as long as the conditions call for it, unless to free cathartics be produced. Clinical facts deduced by others, as well as those coming under my own observation, are absolutely convincing that the internal use of the bichloride of mercury is antagonistic to the toxic effects of the diphtheritic poison, the same as it is to the Lustgarten germ of syphilis (if there is one) and to all other germs as well, including tuberculosis when given discreetly; and it is a local antiseptic. Our forefathers were not far wrong when they gave calomel and other forms of mercury in reasonable doses to their cases of diphtheria, typhoid fever and cholera. But mercury is not the only remedy which has been given empirically for centuries and yet proved to be scientifically correct. We have been giving opium for two thousand years as a reliever of pain, and yet we do not know how it acts; we only know that it does.

The thoughtful physician should never lose sight, in the management of throat cases, of feeding; and, indeed, within twenty-four or forty-eight hours, having placed the alimentary canal in the best possible shape for the digestion and assimilation of food, the nutrition in a form to be readily digested (use it pre-digested if necessary) and assimilated, should be furnished in proper quantities and at proper times; for, after all, good well-fed blood can successfully repel most of the bacilli and their toxines. Stimulation should ever be kept in mind but not used too soon. When we recall the demoralization of the digestive tract and of the nervous centers produced by the excessive use of alcohol in adults, we should have a care in our administration of alcoholic stimulants to delicate children. I have found a pine apple digestive wine, known as zumo-anana, of great service as a stimulant.

Remedies, either local or constitutional, should not be given so frequently or of so irritating a character as to interfere with the digestive function or with the proper amount of rest on the part of the patient.

To epitomize, then, whether the blood serum therapy be applied or not, other treatment of our diphtheria cases should include a full regard for:

Elimination, the keeping open of the secretory and excretory system of glands.

Disinfection, local and general, of the attacked surfaces, the patient and his environment, should be applied, even though the case be only a suspect and present none of the evidence of the more infectious disease.

Nutrition of a character to be most promptly utilized —and nothing is better in this direction than peptonized milk, and milk has the advantage in this form of being soothing to the inflamed surfaces of the throat. Iced cream, made of good materials, is often gratefully received by the patient and is quite digestible.

Stimulation, but not until it is required, for he who crosses his bridges before he gets to them makes a mistake. Oats are better for the thoroughbred roadster than the whip, unless the latter be used upon the animal when in the middle of a bridge which is breaking down, and then the whip serves well to spur the flagging energies; and so with stimulation in disease.

Tranquilization, both of body and mind, should be the rule from the beginning; and to this end the victim should never be given the diagnosis of his case; and no application, no remedy, nothing should be permitted to interfere with a full amount of sleep within the twenty-four hours. If necessary, sedatives to secure rest should be given, and they should be given for an effect. Small doses of a sedative often excite, whereas large doses result happily. Rest is one of the sweetest words in our language, and in the management of no disease is this more true than in diphtheria.

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In closing, let me insist upon the thought that in the

majority of cases the microscope is available only for the confirmation of the diagnosis, though, of course, exceptionally it is essential to the making of a diagnosis; and whether we get our consent to the application of the blood serum therapy or not, let us never lose sight of the proper toilet of the throat, the proper use of our accepted and well-tried remedies in addition.

The child with sore throat, as well as the other members of the family, should be given the benefit of the doubt and isolated, always with the possibility of diphtheria in mind.

3642 Lindell Boulevard.

Vagus Pneumonia.—Meunier discusses (*Arch. Gen. de Med.*, February, 1895) the clinical aspects and pathology of vagus pneumonia (*Brit. Med. Jour.*). In cases of aneurysm of the aorta, the frequency of pulmonary lesions due to pressure on the vagus was noted by Habershon and others. In the cases reported by Hanot the lesions were twice tuberculous and once an ordinary pneumonia, the disease in the vagus being very distinct. Suppurative broncho-pneumonia has been described in this relation. In a case of alcoholic paralysis, Dejerine found pulmonary lesions and disease of the vagus. Section of a vagus in operations has been known to be followed by pneumonia. The author gives the details of a case of Hanot's in which the pressure on the vagus was due to mediastinal glands enlarged by secondary malignant growth. Here there was pleuro-pneumonia with necrosis and suppuration. Possibly lesions of the pneumogastric centers may account for pulmonary changes in some cases. At the present time a neuro-infective theory must be added to the others advanced to account for vagus pneumonia. In an early stage the morbid lesions found are emphysema, increased bronchial secretion, congestion, ecchymoses. Later they are of an inflammatory order. Broncho pneumonia is most often met with. There may be a gangrenous or supppurative pneumonia, a form rare in animals. The division of the pneumogastric diminishes the resistance of the lung tissue to micro organisms, and the individuals may become the subject of broncho-pneumonia, ordinary pneumonia, tuberculosis. One lesion is so constant and striking that it has been termed vagus pneumonia. In human pathology section of the vagus, compression from any cause, a toxic neuritis, a neuroma, or even a functional affection may act as causes for the pulmonary lesions, but no single cause will by itself account for them.

Medical Association of Missouri.—The thirty-eighth annual session of the Medical Association of Missouri will be held in Hannibal, May, 21, 22, and 23, 1895. Titles of papers to be read must be sent to J. H. Duncan, Room 409, Union Trust Building, St. Louis, Mo., before May 1, 1895.

J. C. MULHALL,
A. L. FULTON,
J. H. DUNCAN,
Committee on Scientific Communications.

EDITORIALS

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st.

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The Reporter Question as Viewed by the "Medical Record."

Anent a very sensible action on the part of the President of the Cincinnati Academy of Medicine excluding the newspaper reporters from its meetings, the *Medical Record* takes occasion to ridicule this action and express its fear "that the infant Cincinnati Academy has done a very silly thing." It cites the examples of the New York Academy of Medicine, the New York County Medical Society, in this country, and the Academie de Medicine, of Paris, abroad, all of which admit reporters to their meetings. We are very much surprised that brother Shrady has not mentioned this all important question as affecting another renowned medical body, namely, the St. Louis Medical Society. The harmful influence of the reporter nuisance as affecting our local Society, has time and again been pointed out by the REVIEW. A great deal of the disgraceful scenes which have lowered the standard of the medical profession in the estimate of the public is, as the decent majority of all the physicians admit, due to the discussion of scientific and personal differences in the daily press by doctors and reporters.

If we are correctly informed the societies quoted by the *Record* are not at all examples or models of fraternal harmony, and we venture the statement that the daily press is, to a large extent, responsible for medical

quarrels. The mention of the American Medical Association as an example, proving the legitimacy of the admission of reporters, is a particularly infelicitous one. Anyone who has read the reports of the San Francisco papers last year will easily come to the conclusion, that the "sawbones" were "meat" for the reporters. Not only did they have the portraits of the famous and obscure physicians, but they also lampooned in unmerciful and undeserved manner some of the best and most prominent members of our profession. The REVIEW commented on this occurrence at the time and used it as an argument in its warfare, which it has been waging during the last year against this abuse.

We are sorry to see such an influential journal as the *Medical Record* on the wrong side of this question. This much is certain, that all the shady elements in the medical profession are in favor of the admission of the reporters in this section of the country, which does not mean that once in a while a "straight" doctor may not be found among the advocates and defenders of reporters taking a hand in medical matters.

Bacteriuria.

Bacteriuria is a medical term which ordinarily designates an excessive amount of bacteria in the urine. Formerly Roberts divided the cases of bacteriuria into four classes, viz.:

1. Those in which the presence of bacterioid organisms is associated with incipient putrefactive changes in the urine.
2. Those in which ammoniacal fermentation of the urine is present.
3. Those in which some of the common varieties of schizomycetes are present, without decomposition of the urine.
4. Those in which micrococcus chains were voided with the urine.

All these bacteriurias do not constitute a disease by themselves but are symptomatic manifestations.

Very recently, however, attention has been drawn to a general infection of the body with bacterium coli, originating from an excessive quantity of these bacteria in the bladder. The bacteria may find their way into the bladder from the external genitals, as the bacterium coli has been found on the preputium, the labia and the vagina; but in the majority of cases they appear to be due to auto infection from the bowel, either by a direct passage through the walls of the bowel and the bladder, or by a passage into the kidney or its pelvis, or by way of a general infection.

A case of bacteriuria of unusual interest was recently reported at a meeting of the Berlin Medical Society by Dr. Max Wolff, who presented a specimen of urine which consisted almost exclusively of the bacterium coli, and it was claimed by the speaker, that in the great majority of instances of pure cases of bacteriuria these bacteria are found. In this rather rare, but very interesting affection, which has attracted but little attention so far, symptoms on the part of the bladder are almost always absent, but soon symptoms of an intense general infection have repeatedly been observed. The cause of these symptoms is always obscure, unless the urine has been carefully examined. The case reported by Wolff is an excellent illustration of the necessity of calling into aid all modern methods of investigation in cases of obscure affections as an auto-infection with the bacterium coli necessarily must be, unless the blood and urine have been examined microscopically.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, March 2, 1895, the Presient, F. D. MOONEY, M.D., in the chair.

***

DR. A. H. MEISENBACH presented a specimen of "Osteo Myelitis," involving the whole tibia and the knee- and ankle-joints. The specimen was obtained by an amputation of the thigh at the lower third.

The patient was a little girl, 7 years old, who began, early last Fall, to complain of pain in the tibia at the head and near the ankle joint. A tumefaction gradually developed, and was incised by the attending physician. No relief followed, however, the patient continued to decline in health, had constant fever, was very much emaciated, and when seen by the speaker, the wound was filled with unhealthy granulations, indicating involvement of the deeper structures.

The parts were incised and the softened bony tissue removed by the chisel and curette. This was followed by some relief, which was only temporary, however. A second operation was done on November 12, at which it was proposed to open the entire medullary canal of the tibia, to remove all necrotic material. Accordingly, the bone was laid open throughout its entire length, but it was found that the necrotic process had involved the head and lower end of the tibia, thus extending into the knee- and ankle joints. Conservative treatment was out of the question, so further operative procedure was suspended until consent of the parents to an amputation had been obtained.

The shock accompanying the exploratory operation was so great that the operation for amputation had to be postponed for eight days. At the end of that time amputation was done through the lower third of the thigh. The wound healed very nicely; the patient recovered very rapidly, had no more fever and is now the picture of health.

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This is a very radical procedure, but the extensive involvement of the shaft and contiguous joints left no alternative. The disease is often cured by self-limitation; the necrotic bone is discharged in the form of a sequestrum and Nature fills the gap with granulations.

Another peculiar feature of osteo-myelitis, whether of septic or tubercular origin, is the tendency to spread to other long bones. This danger existed in this case; and in view of the danger to the life of the patient in such cases, amputation must be looked upon as a conservative procedure.

The site of the amputation might be considered as a little too high, but an implication of the condyles and lower end of the femur—a point of election of osteomyelitis—was feared, so the site was selected to avoid the possibility of a recurrence.

In the early history of cases of this character the symptoms are very similar to those of rheumatism and typhoid fever, so that the trouble is not recognized until the local manifestations appear. The disease is often of a rapidly progressive type, so that an early diagnosis is of great importance, the saving of a limb often depending upon it. When it has been definitely established conservative measures should not be employed. The only proper way of meeting the condition, is by the chisel and currette.

The doctor also presented a specimen of "Onychogryphosis," obtained from a woman, 80 years of age. It had developed gradually in 8 or 10 years, and looked like a small ram's horn, bearing no resemblance to a human toe nail.

Dr. Robert Funkhouser had had considerable experience with cases of osteo myelitis, and had observed the conservative efforts of Nature where the disease was very extensive. In one case in particular, where all the bones of the foot were involved together with the shaft of the tibia and fibula, and amputation was done in the upper third. The bone was found soft even at this point and repeated narrow sections made higher up failed to expose normal bone. Fearing that it would be necessary to open the knee-joint, which had not been involved, he desisted from a further removal of bone. The operation was completed and, although some soft bone was allowed to remain, a complete cure was effected.

In Dr. Meisenbach's case it was not possible to save the knee-joint, but speaker would not have done the amputation quite so high up. Antisepsis and asepsis have rendered untenable the old rule, which says that every inch of amputation adds to the danger to the patient's life; but it is advisable to save as much tissue as possible. The reason why the epiphyseal end of the bones is so frequently involved, may be explained histologically. The blood vessels here have a separate and distinct sheath.

Dr. Meisenbach would not have made the amputation so high up if he could have chosen a lower point with a reasonable assurance that there would be no recurrence of the disease. We should see to it that sufficient leverage is obtained for the adaptation of an artificial limb, and this indication is met in an amputation through the lower third. The danger of shock from amputations approaching close to the body is not as great as it was formerly, owing to the improved methods of operation and the perfect application of antiseptics and asepsis.

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Dr. I. N. Love read a paper (see page 241) entitled,

Some Points Pertaining to the Present Pathologic and Therapeutic Status of Diptheria.

Dr. F. R. Fry called attention to a practical feature of Dr. Love's paper, on the questions of diagnosis, which had been recently demonstrated by two cases. In one instance several cases of diphtheria had occurred in a house and the diagnosis had been established by bacteriological examination. Investigation continued to establish the presence of the bacilli six weeks after the patients were clinically well, and the placarding of the houses continued up to that time. The Board of Health recognized the impracticability of further examination and ordered the physician in charge to report the cases as well. In another instance the children were seized with typical grippe symptoms, among others the throat disturbance. Although none of these cases presented a clinical picture of diphtheria, the bacilli were demonstrated and the house was posted for diphtheria and remained so until the patients were convalescent from grippe.

The question to be answered is: Are we to report cases as diphtheria where the bacilli are present, although there is no clinical picture of diptheria, and maintain quarantine?

The practice of bacteriological examination in all cases of sore throat has been very wisely encouraged by the Board of Health, but experiences of this kind will very soon discourage the work. If, as long as the bacilli are demonstrable, houses are going to be quarantined, and children kept out of school and in doors in certain seasons when they should be allowed their liberty, the question assumes a very important aspect. Somebody has suggested that a physician be employed to determine in each instance whether the bacilli are present or not, and at what time it would be safe to remove the bills and set the children at liberty.

This is one of the practical problems in diagnosis.

Dr. A. R. Kieffer had practiced in a locality where diphtheria was very rare, and had there treated a case of membranous croup where there was evidence of obstruction in the throat for several days. After the child had recovered sufficiently to be up and about, it visited a little cousin. In less than a week the cousin developed laryngeal diphtheria and died. Where diphtheria is so rare this circumstance must be considered significant.

One point in the therapeusis of the disease deserves additional emphasis. Diphtheria is doubtless a local disease at first and becomes constitutional by absorption

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of the toxines through the lymphatics. Where the lymphatics are most numerous absorption is most free. The volume of the blood should be kept up by absorption through the intestinal tract, so as to prevent absorption at the seat of disease as much as possible. This may be accomplished by emptying the intestines by free catharsis and then administering liquids freely.

DR. LUTZ asked Dr. Foerster, whether the bacteriological examination of suspected cases of diphtheria is being continued by the Board of Health, whether statistics of the number of cases, etc., are being kept, and whether the time for reporting cases has been diminished.

DR. FOERSTER said that the examinations are still being made, but that no statistics have been kept. The time for reporting cases has been shortened to ten hours.

DR. G. WILEY BROOME called attention to the recent reports from the British Institute of Preventive Medicine, from which we learn that Prof. E. Klein has succeeded in producing antitoxine serum of 1:20000, in from 23 to 25 days; so that the statement of Dr. Love, in which he says that it requires 6 months to produce the serum, is no longer absolutely correct and should not be left unchallenged.

DR. PAUL PAQUIN said that the paper brings us back to the question whether germs play any part in the production of diseases or not; and, if they do, what part they play in the production of diphtheria. It brings us back to the subject of bacteriology in toto; as to whether it has any importance, and what its importance is with reference to pathology.

It is doubtless true that the Klebs-Loeffler bacillus may be found in the mouth, lungs and intestinal canal of healthy persons, and yet no diphtheria be produced; just as we find the germs of septicemia in the mouth, lungs and intestines of persons who have no septicemia. It resolves itself into a field for the propagation of the germs. A grain of corn will not grow until it is placed in the field which is properly fertilized. Germs will not grow until they are placed in the proper fertilized fields and supplied with proper nourishment.

It is true that there are membranes produced in the throat which resemble those of diphtheria but which are due to different micro-organisms. So, too, there are differences in degree and manifestations in different individuals; and a diagnosis should not be based upon a microscopical examination alone, but cultures should be made in order to determine the organism that is behind the trouble. Then, in making a diagnosis, the clinical as well as the microscopical evidence should be taken into consideration. The exclusion of one or the other makes the diagnosis difficult and dangerous.

It is well enough to say that we have one case of disease without any microbes, and another case with similar phenomena with microbes present; but if we analyze the causes behind all of them we are forced to admit that bacteriology does play a part.

The fact that diphtheria may be transferred by inoculation from one person to another, is proof positive that it must be due to a living germ. The fact that the disease is not always produced if a patient is inoculated, does not argue against this proof; for, we know that not every throat presents a suitable field. An irritation or inflammation may be produced by an irritant of any character, but you can not propagate a disease from one person to another except by a living cell.

In using the serum, we should keep in mind that there are mixed infections, and we should never lose sight of the clinical phenomena. We may use three or four drachms in as many injections and it is absolutely innocuous. It produces no reaction; and were it used only as an adjunct, it could certainly produce no injury.

DR. MUELLER endorsed the treatment outlined by Dr. Love, especially the use of benzoate of sodium, which substance he was the first in this country to use, having employed it with admirable effect in two cases of laryngeal diphtheria as early as the year 1878.

DR. CHAS. BARCK called attention to the fact that erroneous conclusions are liable to be drawn from statistics of hospitals. It is true that the death rate in the Berlin hospitals has been reduced from forty to nineteen per cent, but in 1894 three times as many cases of diphtheria have been treated in the hospitals, because the supply of serum was limited, and it was employed only in the hospitals. While formerly only the most severe were sent to these institutions, during the year 1894 the milder cases were treated as well. Considering all the cases of diphtheria occurring in Berlin, including those treated in the hospitals, the death rate has remained about the same.

DR. LOVE considered the point made by Dr. Barck well taken. Statistics can be made to prove almost anything, and they are not sufficient evidence by themselves when they comprise results with a remedy extending over two or three years. The observations should be based on five or ten years' trial. He did not wish to be understood as opposed to the blood serum therapy; on the contrary, in his paper he has clearly endorsed its use. It is being used in large quantities in this city and it is nourishing the patients. No injurious effects have been reported from its use.

All authorities are practically agreed that diphtheria and membranous croup are identical. The reason for the absence of constitutional symptoms in the latter trouble is that the anatomical structures are not favorable to rapid absorption. Absorption in the pharynx is more rapid, and in the nose much more rapid, on account of the generous distribution of the lymphatics.

We all agree that diphtheria is primarily a local affection, and one of the best ways to guard against rapid absorption is to cause a throwing off of the secretions and exudates, to favor exosmosis rather than endesmosis. Purgatives should be employed at once.

One of the reasons for the high death rate in poor families is the fact that mothers often employ home remedies in, what they call, simple sore throat. The

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disease thus gets well advanced before it is properly handled.

Speaker did not wish to be understood as decrying the use of the microscope and test tube as a means of diagnosis. He had used the word "confirmatory" advisably in his essay, and did so in order to impress the junior members of the profession with the importance of clinical and bed side evidence. We should utilize both the microscope and clinical evidence in making a diagnosis, and not conclude that either represents all the evidence in a given case.

The correction made by Dr. Broome is well founded. Klein does report, in the *British Medical Journal*, that serum can be evolved in 25 days. This report had been overlooked in writing the essay.

It was in 1879 that speaker's attention was first called to the value of benzoate of sodium in the treatment of diphtheria, and the fact that Dr. Mueller had first employed it in 1878, establishes his claim for priority in its use. He made a mistake in not reporting his results in the medical journals, when he would have received credit for it. He was certainly working in the right direction.

ABSTRACTS

MEDICINE.

Serious Symptoms Produced by the Bite of a Spider.—In the *Nouveau Montpellier Medical* for February 9th, M. H. Guibert relates the histories of two cases of serious poisoning following the bite of a spider. Cases of this kind, he says, being relatively rare, and, further, the noxious action of the sting of this insect having been stoutly disputed, even denied, he thought it would be useful to give an account of these cases.

In the first case, observed by the author himself, the patient, a man forty years old, was stung on the right knee. The pain persisted for some time, but was not very marked, so that the patient was able to go on with his work for about half an hour, when suddenly he felt a very sharp pain near the injured part and radiating toward the lumbar region of the same side. He became depressed, and a cold perspiration broke out, followed by trembling. The author saw him an hour after the symptoms appeared. He was then suffering from very sharp pains in the lumbar region and in the nape of the neck, the calves of the legs were attacked with true cramps, and the pulse was very small and frequent—from 92 to 100. The face was drawn and covered with a cold perspiration; it expressed great pain and considerable fear. He complained of a sensation of cold which bottles of hot water and thick coverings could not dispel. The axillary temperature was 98.3° F. The author found on the knee two small brownish points, by no means painful, surrounded by a redness due to friction with ammonia, which had been prescribed by an apothecary who had been called in before the author saw the patient. The ganglia of the groin were not swollen. M. Guibert cauterized the involved region and prescribed the immediate administration of a stimulating potion of ammonium acetate and alcohol, to be taken alternately with very strong coffee; at the same time he employed at once frictions with alcohol over the entire body. During the day the patient's condition scarcely changed; although he became a little warmer, the cramps persisted, also the pains in the lumbar region and in the neck. The following night he was restless, there was slight delirium, and he talked a great deal. The next day a slight amelioration was observed, the cramps had almost entirely disappeared, only the abdomen was very painful to the touch. The patient urinated easily, and no albumin was found in the urine. The cardiac pulsations were more energetic and less frequent, and the patient was quieter. On the following day the amelioration was marked; nothing remained but sharp colic and an irresistible desire to have the bowels moved, which it was impossible to satisfy. The author then prescribed six hundred and seventy-five grains of sodium sulphate, but this was rejected by repeated vomitings, which persisted during the day; they ceased, however, at night, when the patient was able to take a considerable quantity of champagne. A gentle purgative enema was then prescribed, which produced a breaking up, the stools showing a hemorrhagic appearance. Gradually, however, under the influence of rest and of diet, complete quiet returned and all the symptoms disappeared, and on the eighth day the patient got up completely cured.

In the second case, which was observed by M. Gombert, the patient was stung on the right ankle, and in a few seconds the pain became so violent that he could not walk, and had to be carried to M. Gombert's house. He presented very alarming symptoms of poisoning; there were extremely painful cramps and generalized convulsive tremblings, and the whole body was shaken with oscillations which became more and more frequent and had the appearance of tetanic contractions. These attacks lasted scarcely a minute, but returned at the end of four or five minutes. In the interval the patient said he suffered all over. However, he could drink, raise himself, and hold himself erect; his mental faculties were perfect, and the pulse was strong and regular. On the ankle two almost imperceptible points were found, which were not at all painful, even on pressure. Chloral and potassium bromide were administered, and diminished the number and the intensity of the convulsive attacks; the patient was then able to return to his home. A few hours later the cramps and the pains had ceased completely, but were replaced by diarrhea and vomiting. The vomited matter was mixed with blood; blood was found also in the stools, and later on in the urine.

Some hours afterward there were bloody diarrhea and hematuria, but the general condition was quite good. On the third day the patient was much better, and on the fourth day all danger had disappeared.

These two cases, says M. Guibert, present striking analogies. We see the same cause, the sting of a spider, giving place soon after to symptoms of a peculiar evolution and certainly alike in the two cases—cramps, convulsive trembling, and troubles of variable gravity involving the muscular system only followed by gastro-intestinal and renal symptoms which, says M. Guibert, may lead us to think that the poison was eliminated by the intestine and by the kidney. These two cases scarcely accord with what Laboulbene writes in an article on spiders in the *Dictionnaire Encyclopedique:* "In these regions the venom of spiders does not produce any unfavorable effects, and I will prove it. Walkenaer allowed himself to be stung by the largest spiders, and, he says, without any pain, redness, or swelling resulting. These stings did not cause any marked sensation, not any more than that produced by the prick of a fine needle in the finger. The spider's venom is, then, very much less active in man than that of the bee, of the wasp, of the gnat, of the flea, etc. In central France Duges made experiments and allowed himself to be stung by large spiders. He did not believe in the noxiousness of their venom. The danger, he said, was imaginary."

We can not in any way, says M. Guibert, subscribe to this opinion; in the two cases mentioned the relation of cause and effect was too evident to be denied. He does not ignore, he says, that the objection may be raised that the real cause, the spiders, had escaped, for in spite of a careful search he was not able to find them, and he recognizes the fact that this is a flaw, but one for which he can not be held responsible, and it can not, unfortunately, be compensated for by the description given by the patients, who were the only ones that saw the spiders.

It is none the less true, however, says the author, that it should, in future, remain accepted that the string of certain insects or spiders may produce positive symptoms, the gravity of which varies, it is true, and the situation of which is especially in the neuro muscular system, extending subsequently to the emunctories, causing various passing troubles. M. Guibert does not think it would be scientific, still less practical, to consider at the present time that these accidents belong exclusively to the domain of popular prejudice.—New York *Medical Journal.*

A Large Dose of Carbolic Acid; Recovery.—The following report of a case of carbolic acid poisoning may prove of interest to the readers of this journal.

On December 5 last I was called hastily to see a gentleman, who had swollowed what would be taken for a fatal dose of carbolic acid. He had taken about a fluid dram of 95 per cent acid by mistake. The patient was a man of intelligence, aged about 41 years, weighing 160 lbs., and of strong physique. He immediately swallowed three or four tumblers of water on discovering what he had done.

I was at his side in fifteen minutes after the dose had been taken, and ordered one-half ounce of sweet oil and two whites of eggs, which the patient took with great difficulty. I continued to give him the whites of eggs half-hourly thereafter until vomiting was produced, which was in about an hour. I endeavored to give him an emetic of ipecac, but he could not swallow mobile liquids. He presented all the symptoms of alcoholic intoxication, he staggered as he walked, and had to be assisted. The countenance was pale, indicating collapse; his articulation was indistinct, the mind was confused, he had trembling of both arms (but more marked on the right side), vomiting, pupils contracted, pulse hardly perceptible, and respiration sixteen per minute.

About twenty-four hours after he had smallowed the carbolic acid, he passed smoky urine, which had the carbolic smell He did not notice any particular weakness until the second day. On Thursday and Friday, (the accident occurred on Tuesday), there was a slight circumscribed edema of the upper lobe of the left lung, about the size of a silver dollar; it was with difficulty that he could breathe, but these symptoms soon passed off. On Sunday, the 9th, I found the edema gone, and his general symptoms improving. The urine was improved, having cleared up, the bowels performing their functions properly, the "rawness" of the throat and esophagus was no longer present. Besides the whites of eggs administered during the first day, a demulcent tea of flaxseeed and Iceland moss was given ad libitum, combined with champagne and small pieces of cracked ice.

Now, what is a fatal dose of carbolic acid? This is of interest to us as physicians—first, in order to quiet the fears of the family; second, from a medico legal point. I consulted several works on materia medica and therapeutics, and found that they gave very little information on this subject. Bartholow, Ringer, and Dunn ("Veterinary Medicines") gave me the most information. Dunn states that when carbolic acid is swallowed it is readily absorbed and produces inebrient effect by acting on the cerebro spinal axis. Dr. Sansom found that two drams proved immediately fatal to dogs and that two drams killed a full-grown cat in two minutes. Dr. Cullen, of Calcutta, gave one-dram doses to small dogs, and they died in ten minutes. Bartholow states that diffusion takes place with such rapidity that formidable symptoms arise in a very few minutes. A one per cent solution has caused serious symptoms when injected into an abscess; six drops of the pure acid have caused dangerous symptoms, and a teaspoonful has produced fatal results (Dessau). Death has occurred in a very few minutes and is rarely postponed over two days. Ringer states but very little on the toxic effects of carbolic acid, and less can be found in our standard works

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on the practice of medicine.—A. C. Van Syckle, M.D., in *Amer. Med. Surg. Bull.*

Therapeutics of the Electric Light.—Dr. M. Cleaves of New York, in a paper read before the American Electro-Therapeutic Association, discussed at some length the uses of the electric light for illuminating cavities of the body, as the eye, ear and throat; then she proceeds to the more important subject, its employment in the treatment of disease, and boldly asserts that the electric light is capable of being made a powerful therapeutic agent.

It may be added, in support of this declaration, that such eminent investigators as Drs. H. Wark, Th. Zeisler, P. A. Khmelevesky, of St. Petersburg, Klebs, Loeffler and Charcot all sustain the thesis that every one of the electric light rays has a specific action and energy peculiar to itself.

The writer himself has been able, from a number of cases under his own observation extending over several years, to lay it down as a general rule for the application of the light, that the red light will act directly upon the arterial blood; the yellow will stimulate the nervous structures, these abounding in elements which give that color; and the blue cools the arterial blood, but intensifies the venous. Thus for a cold, inert condition of the system indicated by paleness and lividity, red light will be the proper remedy, except there be great nervousness. For inflammatory conditions the blue or indigo is required.

The effects of the blue light in arresting the development of bacteria and other micro-organisms have been abundantly shown beyond dispute. The writer has proved its utility likewise in numerous cases of an erythematous condition of the nose. The blue light obliterated the prominence of the blood-vessels, diminishing thereby the supply of blood to a marked degree, and so reduced the organ to its normal size and color with none of these odious results which proceed from the usual method of scarification.

Whether a better and more thorough means can be obtained for the successful treatment of victims of the opium habit and other narcotic misuses, is a question yet to be settled. It is certain that the application of the yellow light to the lower cervical region will so improve the general condition of the circulating and nervous systems as to compel the "snakes" to take their departure. For the transferring of impure elements and waste material from the interior organism of the body to the surface, the light rays have been found most efficacious. Hence, likewise, in diseases of the skin, arising from imperfect elimination of morbific material, the application of electric light is certain to produce the most gratifying results. In functional disturbance of the heart and of the nervous system in general, resulting from defective assimilation, the beneficial results are lasting, as well as speedily apparent to abser vation.

In a paper read before the Societe Internationale des Electriciens in Paris, M. Chs. Marechal demonstrated, with an electro-chemical actinometer, that luminous energy is transformed into electric energy. This change of light into electric force is not effected through the calorific power of the light, but by actinism. The transformation takes place in all the divisions of the spectrum. It depends, however, upon the coloring matter employed to sensitize the plates of the actinometer. M. Marechal ventures accordingly upon a hypothesis, which, bold as it may appear, is based upon facts which have been ascertained by observation and experiment. By it he demonstrates the close connection between electric and luminous phenomena, and the intimate connection existing between the solar light and natural phenomena, such as terrestrial magnetism, the variations of the magnetic needle, earth currents, etc.

The absolute importance of light and color in all operations of the universe is thus clearly set forth. Is it not probable that these experiments enable us to deal more successfully with abnormal conditions of the body which have heretofore been found intractable as well as vexatious?

There have been several varieties of apparatus devised, which are well deserving the attention of the medical profession, for the applying of the electric light as a therapeutic agent. No longer is there an excuse for neglecting to employ it because of the unsuitableness of the instrument. The results have been gratifying and encourage its further employment. We need, for conviction, only to understand the rationale of its efficacy. It modifies the cellular activity, increasing or diminishing it, as the case may require; raises the resistive energy of the individual cells. Thus it reaches the cause of the various derangements of the organism, penetrating to the very sources of life, visible and invisible.—G. Meeker, M.D, *Amer. Med. Surg. Bull.*

Acute Yellow Atrophy of the Liver.—In reporting the following case of a very rare disease, namely Acute Yellow Atrophy of the Liver, I must frankly admit that, in spite of every precaution to make the history and record as complete as possible, I had no suspicion of the character of the disease till well on in the autopsy. With this acknowledgment, any shortcomings in the clinical examinations are amply accounted for.

Agnes P., a servant girl, 19 years of age, of Polish birth, and single, presented herself for admission to the Buffalo General Hospital on August 18, 1894. So little evidence did she show at that time of a serious illness that the hospital authorities directed her to the overseer of the city poor for a permit, a formality that would certainly have been waived, had there seemed to be any valid excuse for so doing. She walked to and from the street car connection, rode fully three miles in the trip to and from the overseer's office and returned to the hospital in the afternoon without any manifestation of fatigue, and stood beside the desk of the resident physician, while he made the usual inquiries regarding pre-

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vious illness, family history, etc.—none of which elicited information of any significance.

The patient was a short, stout girl, well nourished, and she complained only of constipation of a few days' duration and of feeling dull. She was, however, quite reticent. The conjunctivæ at this time showed slight icterus. She was sent to the ward, a mercurial cathartic was given, her temperature was found to be 99, and the examination of the heart and lungs by the resident physician revealed nothing abnormal. During the following twenty-four hours, her bowels moved twice, nothing unusual being noticed about the stools.

On August 19, I saw the patient for the first time and made a physical examination of her chest and abdomen. Palpation of the whole trunk elicited no complaint of pain and no other evidence was found of any disease. I could get no replies to my questions, as the patient was rolling her head from side to side and moaning in a hysterical way. The pupils were normal and, upon being informed that the girl had begun menstruating the night previous, I directed no special treatment but that the usual chart should be kept, and that a urinalysis should be made before my next visit. On the morning of August 19, the temperature was 97°, rising to 100° in the evening and falling to 98° on the morning of August 20. The pulse, meantime, ranged between 80 and 100 and was strong and natural, unaccompanied by any heart murmur. On the morning of the August 20, it rose to 110°. The respirations were normal at all times. The urinalysis made August 19, of a single sample, was as follows: Red, acid, urinous odor, specific gravity 1022, no albumin or sugar, microscopical examination negative.

During the night of August 19, the patient had a copious hemorrhage which, upon examination, proved to come from the bowel. The uterus was also examined and found not to be enlarged or abnormal in any way. There was, however, a copious flow from the os, and inasmuch as the hemorrhage was so free, the cervix was dilated and the uterine cavity was ascertained to be normal. The blood coming from the rectum was black, tarry and thick. Following the hemorrhage, the patient became comatose, the urine was retained so that catheterization became necessary, and, in spite of vigorous stimulation, she died at 1:30 A.M., August 20, forty-six hours after entering the hospital.

The autopsy was held eighteen hours after death, at the hospital morgue, in the presence of six of the attending and consulting staff. The body was well nourished, without marks of violence; there was no rigor mortis, no post-mortem staining, no noticeable icterus. The pericardium was filled with yellowish fluid to the amount of about 100 c.c. The heart muscle was gray and mottled, the organ weighed 198 gme. (7 oz.). The right lung was adherent along its posterior border, was healthy in appearance and weighed 340 gme. (12 oz.). The left lung weighed 260 gme. (9¼ oz.). and was of a very dark reddish color. The stomach was small with a considerable quantity of dark, coffee-ground fluid. The mucous membrane seemed normal except for a slight erosion near the cardiac end. The small intestine contained a moderate amount of thick, tarry fluid which, upon removal, revealed an apparently healthy mucous membrane. The large intestine from the ileo-cecal valve to the anus was filled with dark blood, the mucous membrane was somewhat injected with many ecchymotic spots but with no erosions. The pelvic organs and the kidneys were normal in all respects. The liver weighed 990 gme. (35 oz.) and was of a very light yellow color, the capsule was smooth, the liver cut easily and showed a general mottled appearance with areas of extreme fatty degeneration. The peritoneum contained a small amount—only a few teaspoonfuls—of bloody serum, the blood having the appearance of being very recent in its advent. The peritoneum presented numerous ecchymotic spots with an otherwise healthy surface.

A good sized slice of the liver wes submitted to Dr. Frank Metcalfe, then acting pathologist for the hospital, and he reported that the sections made by him revealed no hepatic cells, but that a fatty debris in lieu of normal liver tissue led him to confirm our opinion that we had witnessed the autopsy on a case of acute yellow atrophy of the liver.

I have but to add that the direct cause of death was not loss of blood, the hemorrhage, though copious, being insufficient and there being none of the usual signs of exsanguination. The patient died comatose, apparently overwhelmed by the poisons which accumulated in the absence of proper hepatic function. — Charles Cary, M.D., in *Amer. Med. Surg. Bull.*

The Antiseptic Action of Iodoform.—A most interesting memoir on the manner of interpreting the antiseptic action of iodoform, has been recently published in *les Archives de Medecine Experimentale* by Dr. Stchegoleff.

It is well known that this substance, which gives us such splendid results in practice, has shown itself quite inferior in experimental work. In 1887, Heyn and Roosing demonstrated that the presence of iodoform on gelatin plates did not prevent the development of the various kinds of micro-organism (staphylococcus pyogenus aureus, pneumococcus, etc.). These writers also observed that a tampon of iodoform gauze, when introduced in the vagina of a healthy women, was when removed, penetrated by micro-organisms. Their experiments were verified by others. There was consequently an unexplainable contradiction between the experiences of surgeons and experimental workers, the former admitting, the latter denying the antiseptic proprieties of iodoform.

Dr. Stchegoleff, in order to throw some light on the matter, undertook some experiments in Prof. Strauss' laboratory, with the result of explaining the mode of action of the drug. He found that meat-peption-gelatin bouillon, which is an excellent culture media for the bacillus of tuberculosis, did not favor the development

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of this organism when iodoform was present in the quantity of five per cent. The bacilli inoculated in this iodoform boullion died in forty-eight hours. An emulsion of a virulent culture in a ten per cent iodoform solution, when injected in guinea pigs, showed that the animals lived longer than the animals which were in oculated with a pure culture. In short, iodoform kills the bacilli of tuberculosis in cultures and only attenuates their virulence when injected simultaneously into the organism.

The action of iodoform on the staphylococcus aureus is quite the reverse. Thus this organism grows as well in a medium containing iodoform as in a normal one, but, on the contrary, the inoculation of organism submitted to the action of iodoform proves it to be quite inoffensive. Cultures grown in a medium in presence of iodoform can be injected at doses of one cubic centimetre to two cubic centimetres without producing any symptoms other than a slight local reaction, while the control animals inoculated with streptococci grown in media without iodoform, presented the formation of abscess or died in a few days from septicemia according to to the degree of virulence of the culture. If the iodoform is mixed with the culture of staphylococci at the time of inoculation, a small local abscess is the only result; the accidents are consequently not entirely sup pressed—they are only attenuated. Thus iodoform does not alter the vitality of the staphylococcus in the culture media and still it modifies its pathological proprieties How can this apparent contradiction be explained.

Dr. Stohegoleff questioned as to whether iodoform did not act on the toxines secreted by the staphylococ cus without acting on the organism itself. He made two series of cultures; the first were normal, the sec ond contained iodoform in the quanity of 10 p. c. At the expiration of one week he filtered them, in order to eliminate all the organisms, and then injected rabbits with the filtered liquid. The culture liquid which contained no iodoform killed the animals in several hours, while the animals inoculated with the liquid containing the drug presented no accidents whatever. Dr. Stohegoleff believes that, under the influence of iodoform the toxines of staphylococcus are transformed into nontoxic iodine combinations. It is readily understood from this fact how iodoform, when applied to a wound prevents suppuration and infection, without killing the pyogenous organisms. The Klebs Leffler bacillus acts nearly in the same way as the staphylococcus in the presence of iodoform. It grows well on a medium containing iodoform, but its virulence is weakened. The toxines of diphtheria are attenuated and even annihilated by iodoform, provided that the dose is sufficient and can act long enough. This antitoxic action of iodoform is most remarkable and explains its good effects against organisms which it is incapaple of destroying.

The number of Dec. 20, 1894, of *l'Union Medicale*, from which the above report is taken, also mentioned an article which appeared in the *Journal of Russian Military Medicine*, by Dr. Saltikoff, entitled. "The Influence of Iodoform on Pathological Microbes." According to this writer, iodoform acts in general on the virulence and proliferation of micro-organisms, but its action differs with the different kinds of bacteria. Thus this influence is only produced in an evident way at the commencement of a growth of the fetid opalescent bacillus; later, this organism grows as well on media containing iodoform as on one without the drug, and neverless its virulence on white mice is completely lost.

The streptococcus is only slightly influenced by iodoform. Cultures of charbon bacillus are lessened in growth and its virulence diminished by the drug. The action of iodoform on the staphylococcus aureus is marked, but the virulence of this organism is only slightly decreased. On the various kinds of vibrions, iodoform acts in a varying manner. It prevents the growth of the comma bacillus and Finkler-Prior organism, but acts only slightly on Deneke's bacillus.

It may be said, in a general way, that besides the ordinary proprieties of iodoform, such as diminished the secretion of wounds, lessening pain, etc., this drug diminishes the proliferation of several kinds of pathological organisms and lessens their virulence.—*Annals of Gyn. and Ped.*

Proteids.—Many attempts have been made to express an empirical molecular formula for proteids, but little light has been obainted regarding their true structure; and the same is true of the several theories of their structure that have been successively proposed. While they have the advantage of being suggestive, they carry little proof. The only way open to obtain any real knowledge on this subject seems to be by the study of their decomposition products, and of these there are two classes, according to the way they are formed:

1. The cleavage products, still partaking of the proteid nature and but little removed from the original substance.

2. The crystalline products produced by more destructive decomposition.

These latter exist in the gummy residue, and when the known products are separated, the chemist is accustomed to classify the remaining substance as unknown extractives. Recent years have seen an advance of our knowledge regarding both these classes of decomposition products.

The primary cleavage products are formed by ferment action in both peptic and pancreatic digestion, as well as by several vegetable ferments, and also by action of hot water, superheated steam, and boiling acids. The proteid appears to yield two parts, well known as the hemi moiety and anti moiety of the proteid molecule. These differ in that, while the former is cabable of yielding both leucine and tyrosin and other crystalline

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products, even by tryptic (pancreatic) degestion, the anti group of cleavage products yields no tyrosin, even by decomposing with dilute acids; and it does not give Millon's reaction, which is dependent upon the tyrosin residue of the proteid molecule. This, then, is the beginning of knowledge regarding the cleavage of albuminous substances, the formation of these two groups of products. Looking at the products from a different point of view, we have Kuhne and Chittenden's classification of albumoses, or, more correctly, proteoses and peptones, these latter further removed from the original proteid and always formed through the stage of proteose. Looking at the products from this standpoint, the process is one of simple hydration with cleavage, since the successive products contain a diminishing amount of carbon.

The crystalline products of proteid decomposition are formed in part by pancreatic digestion, also by the action of acids and by the action of alkalies. But acids and bases do not act in the same way upon proteid matter. Both, in common, yield ammonia and amido acids; but baryta, for example, yields oxalic and acetic acids, which decomposition by acids does not. In the decomposition of casein with hydrochloric acid and zinc chloride, Hlasiwetz and Habermann, investigators of twenty years ago, were able to separate leucine, tyrosin, aspartic acid, glutamic acid, and ammonia, yet there remained a viscid mother liquor from which they were unable to separate any crystalline products. Horbaczewski, in his study of this class of crystalline products, was likewise unable to separate anything further. Drechsel, however, by the aid of more modern methods has recently been more successful. He, first using phosphorwolframic acid, and later by a method involving the formation of a silver-nitrate compound. was able to isolate two bases which he has called lysin and lysatinin. These bear much the same relation to one another as creatin and creatinine do Lysine is, in fact empirically homologous with creatine and also with ornitine, a base separating from the organism of birds as a conjugate compound, in place of hippuric acid in man, when benzoic acid is administered.

From the mother liquor a base bearing the formula $C_8H_{16}N_2O_2$ has been separated, which with alcohol and hydrochloric acid at 140° breaks up into benzoic ethylester and the hydrochloride of diamido-acetic acid. Phosphorwolframic acid has likewise separated from the mother liquor two bodies, $C_6H_{14}N_2O_4$ and $C_{10}H_{18}N_2O_5$.

Schutzenberger, starting from our knowledge of these decomposition products, has attempted to form peptone and proteid matter synthetically, and has succeeded, by heating mixtures of amido compounds with urea and treating at a high temperature with phosphoric anhydride, in forming what he calls pseudo-peptone, which certainly does resemble peptone in its general reactions. It gives both the biuret and xanthoprotein reactions and is precipitable by tannin and picric acid and many salts and other compounds which react in a similar way with natural peptone. He has devised formulas and reactions to represent the synthetical formation of peptones, but they are far too theoretical and complicated to merit consideration here. This will suffice, however to show that a steady and substantial progress is being made in the solution of these problems which constitute the necessary step to the discovery of the chemical reactions which constitute life itself.—*New York Med. Jour.*

A Chemical Antidote for Chloral Poisoning.—The *Glasgow Medical Journal* for February publishes an article on this subject by Dr. John Dougall, of Glasgow. When chloral was first used, says the author, its hypnotic action was thought to be solely due to the generation of chloroform from it by the alkalies of the blood; its effects on the body generally were, and indeed still are, held as almost identical with those produced by chloroform. This view, however, he says, has been disputed on the ground that the quantity of chloroform which a full dose of chloral is capable of producing is quite inadequate to cause the hypnosis and anesthesia that have been observed, also that the greater part of the chloral is exhaled from the lungs unchanged, and that small quantities of it may be found in the urine, but no chloroform. Whatever facts or theories, however, says Dr. Dougall, there may be regarding the manner of the hypnotic and anesthetic action of chloral, there can be no doubt about its chemical composition and affinities, and, in particular, that it is almost at once decomposed, at and above 60°F. outside of the body in an alcoholic solution of potash into formate of potassium and chloroform, and, as the author has proved by trial, somewhat less quickly in an aqueous solution of potash.

Assuming, he says, that a person has taken a poisonous dose of chloral, says eighty grains, and that there could with safety be given as a chemical antidote, twenty-seven grains of potash, the amount being the quantity by weight in the formula required to decompose eighty grains of chloral—in such a case, says the author, there are strong a priori grounds for assuming that in about fifteen minutes the chloral in the system would be entirely changed into formate of potassium and chloroform, or, at least, that so much of it would be decomposed that the residue would be harmless. But would not the potash, he asks, or the amount of its formate, or of the chlorform thus produced, be as lethal as the chloral? Undoubtly twenty-seven grains of potash swallowed at once, even much diluted, would cause serious symptoms. But if even half that quantity was given in divided doses—say seven grains every hour—in warm milk, gruel or barley-water, it seem very probable that by this means no serious irritation of the gastro-intestinal tract would be the result, and that in a short time so much of the chloral would be decomposed as to render the rest at least non-lethal.

The liquor potassæ of the British Pharmacopeia, says Dr. Dougall, contains about a grain of potash in 16

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mimins; and the maximum dose stated is sixty mimims. Hence, he says, to give seven grains of potash is equal to giving a hundred and twelve minims of liquor potassæ. He think in may be assumed that this quantity, highly diluted, might be given without fear of causing unfavorable symptoms. By this means twenty grains of the chloral would soon be decomposed, thereby neutralizing its lethal power to a certain degree, if the potash is given before the patient is too far gone to be afforded relief by this means; then, if in an hour after a similar does of potash is given in the same way this would reduce the chloral in the system to forty grains, a quantity quite within the bounds of safety for an adult, provided there is no heart trouble.

Dr. Dougall says that he has proved by experiment what has been stated by others—namely, that the carbonates and bicarbonates of potassium and of sodium also decompose chloral; but their action particularly that of the bicarbonates, is very slow, and, besides, a larger quantity than of potash is required, also a heat much above that of the body. With regard to the action of formate of potassium, it merely causes a peculiar eruption of the skin, which soon disappears when the use of the drug is stopped. This eruption is well known to habitual chloral-takers, and seem to prove that chloral is decomposed in the blood as stated.

With regard to the probable effects of the chlorform which would be generated by the decomposition of forty grains of chloral, the author finds that this quantity of chloral requires 18.5 grains of potash for its decomposition, which resulting in the production of 28.5 grains of chloroform, equal to 21.5 minims. As much larger amounts of chloroforn (from half an ounce to four ounces) have been swallowed and recovery has followed, and as it is likely that the greater part of that which is generated in the blood by the decomposition of the chloral is exhaled as fast as it is produced, Dr. Dugall thinks that nothing serious need be feared on this point.

Lactic Acid in the Stomach Contents.—Bial, of Ewald's Clinic (*Berl. Klin. Woch.*, February 11, 1895), relates a case of ulcer of the stomach with atrophic gastritis and gastrectasis, in which lactic acid was present in the stomach contents (*Brit. Med. Jour.*). He refers to recently recorded cases in which this acid has been present, and yet no malignant disease existed. It is only by recording such cases that a true estimate of Boas' views can be made; lactic acid is certainly present in a large number of cases of gastric carcinoma. A very wasted man was admitted with loss of appetite, feeling of weight in the epigastrium, and vomiting. The stomach was dilated. Lactic acid was found by Boas' method after Boas' test meal had been given. In two or three days the patient become apathetic and drowsy. The vomiting persisted in spite of washing out the stomach. The vomit contained lactic acid, but no hydrochloric acid. Death soon occurred in coma. In the stomach there were several ulcers, with cicatrices in the neighborhood of the pylorus, which was slightly narrowed. There was chronic gastritis passing into atrophy about the cardia. Although no tumor could be felt, the case was thought during life to be one of gastric carcinoma owing to the absence of hydrochloric acid and the large quantities of lactic acid present. Although on admission the patient was wasted, there was no reason to anticipate so rapid an end; and he was in fairly good condition when the nervous symptoms supervened. No explanation of them could be found at the necropsy. They must have been due to auto intoxication since there was no evidence of carcinoma, nephritis, or diabetes. The source of the poisoning lay in the retention in the dilated stomach and in the altered gastric secreted by the changed mucous membrane. Some other factor at present unknown must have co operated, since fermentative changes may be marked, yet no poisoning occur.

SURGERY.

Pathology of Poliomyelitis.—In a recent number of the *Wiener Klinische Wochenschrift* Dr. E. Redlich publishes an important contribution to this subject, the tendency of which is to support the view that in so-called acute anterior poliomyelitis the process is to be regarded, not as a confined to the ganglion cells, but as an acute inflammation affecting chiefly the anterior horns of the spinal cord. The paper consists mainly in a description of the cord in a case which terminated fatally a few days after the onset of the symptoms, and the following account of it is taken mainly from an abstract of the paper which appears in the *Neurolog. Centralblatt* of December 1. The patient was a child aged five months, previously healthy, who became restless, with a high temperature. On the fourth day after the commencement of this illness there was weakness of all the limbs, with loss of voice. Loss of knee jerks, slight sensory impairment, difficulty in breathing, and transitory difficulty in swallowing were also present. The cranial nerves, except so far as was manifested by a doubtful unilateral weakness of the face, showed no alteration. There was slight feverishness. On the ninth day of the illness there was temporary cessation of respiration, which was repeated on the tenth day, and from which the child did not recover. An examination of the spinal cord showed the presence of an acute inflammatory process affecting the cord throughout its entire length. This process did not confine itself to the anterior horns, although these were chiefly affected. It involved also the remainder of the gray matter and even the tracts of white matter, in which there were small foci of inflammation. The changes in the anterior horns were most intense in the lumbar enlargement, less so in the cervical swelling, and least of all in the dorsal region. The ganglion cells showed no marks of acute degeneration. Outside

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the anterior horns, in the posterior horns, in the central substantia gelatinosa, and in the part of Clarke's column, and also in the white matter—especially the lateral and anterior tracts there were found small areas of inflammation. In the posterior columns only one such area could be discovered. These areas in the white substance seemed to depend upon acutely inflamed vessels, and although they were in the vicinity of the anterior horns they did not appear to be connected with them. The vessels outside the cord also, especially the artery of the anterior fissure and it branches to the anterior horns, were similarly affected with acute inflammation. Similar foci of inflammation were found in the medulla oblongata and the basal structures similarly grouped around inflamed vessels, but the cortex cerebri seemed to be free from them. The peripheral nerves, especially the phrenic and inferior laryngeal, showed very severe degeneration, and the muscles showed evidences of fatty degeneration. It is, of course, quite open to doubt whether this was really one of the oridinary type of infantile paralysis. The appearances in the cord suggested the presence in the blood of some toxic material affecting the vessels, and simultaneously or secondarily the structures also of the spinal cord.—*Lancet.*

Streptothrix found in Cerebral Abscess.—Streptothrix is one of the hyphomycetes of the genus cosporon. and has the character of a true mycelium without dissepiment, whose filaments, deprived of sheath, are limited by a delicate membrane. Actinomyces is one of the best known of the class.

The case here described was that of a man, aged 32, admitted under Prof. Vergely, of Bordeaux, with the following symptoms:

Thaken suddenly ill December 5, with a convulsion; took to bed December 16; became drowsy, had much headache, vomiting, obstinate constipation, and wasting, aphasic on Dec 26; pupils contracted, no squint, tem perature normal; paralysis and anesthesia of the right upper and lower limbs, with some rigidity of leg; reflexes abolished; no sugar or albumen in urine; no disease of ear or nose. Tuberculous meningitis was diagnosed.

The man died on Dec. 27, at 1 p. m.; there was no meningitis; the left cerebral hemisphere was very edematous, rather soft, and contained in the the centrum ovale, toward the prefontal region, an abscess (size of of small nandarin) filled with greenish pus. No tubercle was discovered; there was a small abscess at the apex of one lung, and a purulent infarct in the right kidney. No nasal, aural, or cardiac disease. Examination of the pus from the brain and kidney disclosed a filamentous, branched fungus, without dissepiment, and belonging to the genus streptothrix. No trace of this organism was found in the lung. The bronchial glands were not examined. Inasmuch as several other organism were present as well as the streptothrix, it is difficult to know its exact pathogenic properties; for the same reason pure cultivations were hard to secure, and only lived to the second generation. The parasite differs from actinomyces:

1. By the absence of grains in the pus:
2. By the delicacy of the mycelium, which was no tendency to form masses.
3. By its abundance in the purelent foci.—Salvazes and Riviere, *Brit. Med. Journ.*

OBSTETRICS AND GYNECOLOGY.

Physical Exercise for Amenorrhea and Dysmenorrhea of Young Girls.—In common, probably, with all general practitioners, early in my professional life I began to meet cases of disturbed menstrual function among young women—dysmenorrhea, amenorrhea, alternating with menorrhagia, at least an irregular and profuse bleeding from the genitalia of young women, which for want of a better or more concise term may be called menorrhagia. Cases, also, of late menstruation, young women of sixteen to twenty in whom the menstrual function had occurred only a few times, or not at all. What to do with these cases often perplexed me—it sometimes does so yet. However, with years and experience and some acquired tact, I feel I am doing better work. I regard purely systematic treatment of these conditions as very unsatisfactory. Emmenagogues in my hands have proven nearly useless as against suppression of menstruation. I am not at all certain that I ever saw any useful result from the administration by the mouth of medicines for the purpose of checking a profuse uterine bleeding. I have given ergot, viburnum prunifolium, hydrastis, etc., and have seen my patients get well in course of time; but not in so prompt and satisfactory a way as to indicate that the drugging had much to do with the ultimate favorable result. Of course in the cases of painful menstruation, systematic treatment by giving analgesics tides over the anguish of the hour, but does it cure? Relieving constipation, improving digestion, inculcating correct habits of living promotes assimilation and removes anemia, and hence has a favorable influence; but all this rarely effects a complete cure. Why? The majority of these unfortunate women are the daughters of parents in fairly easy circumstances. They have not had the benefit of early systematic and varied physical labor. They have been in school ever since they were six years old. Mentally, they have been crammed with what purports to be education. Like "galley slaves" they have been pushed, if not scourged, to daily mental tasks. School examination day, and will they "pass" with a high average? has ridden their minds like an "old man of the sea," day and night. At twelve years of age they have been told they must be encased in corsets and behave themselves like young ladies. They must now restrain themselves from all exuberance of physical life. They

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must henceforth do no romping, because to do so is unladylike. The result is they are physically undeveloped at the time when perfection is called for in order that the sexual function should appear without shock and disturbance. They have undeveloped uteri, thin, meagre bodies, or else roly-poly baby fatness. What shall we do with these unfortunate young people to ward off the dangers that beset them? It is manifestly improper to massage them, as Thure Brandt would advise, at least to the practitioner in the town or small city it is utterly impracticable to do so. Here I recollected what systematic physical exercise did for scores and scores of thin-limbed, narrow-chested boys, whom I saw in 1861 gradually transformed into tough and able-bodied men by the stern and merciless drill surgeant. Why not develop these slender, fragile female bodies by physical exercise? But how? My own experience when a student of medicine occurred to me. I was raised a farmer boy and inured from childhood to the hardest and most constant physical labor. At the age of eighteen I began the study of medicine, and very ambitiously changing from an active out-door life to a sedentary and intensely studious one in doors, I soon felt the change in gradually impaired health. I hung up in my room a bag of sand and put on a heavy pair of buckskin gloves, and whenever my brain became dull and attention to my studies grew irksome, I got up and vigorously pounded that bag of sand with my fists. The effect was little short of magical. Constipation disappeared, appetite became vigorous, assimilation perfect, with corresponding improvement in spirits and mental vigor. I concluded to try the experiment of teaching young ladies the art of boxing for the purpose of curing dysmenorrhea due to infantile uterus. And I have repeatedly secured results of the most positive and gratifying character. I direct a stout bag to be made of canvas and firmly stuffed with rags or old cast off clothes. This bag is suspended from the ceiling in our patient's bed room. I visit her in company with her mother and direct that her corset be discarded in toto. I step up to her boxing bag in the proper position and vigorously punch it left and right. Then I place her before it and carefully teach her to hit straight from the shoulder with vigor and precision. Slight, languid taps, awkwardly given, will not do. An occasional bout of this exercise will not yield results. It must be systematic, vigorous, and at least twice daily gone through with for a more or less protracted period. For the first week, five minutes, twice daily, given with proper vigor and vim, will suffice, and, indeed, is all the feeble muscles of our patient in her undisciplined state can stand. Recollect her heart is pari-passu no stronger than the flexors and extensors of her arms. Hence at the end of five minutes her respirations are greatly quickened and her heart's beats much accelerated. By the end of the second week she can take ten minutes of this exercise twice daily. She should be required, when alone in her bed room, to do this work in her flannel union suits without the encumbrance of other clothing. After a month of this treatment she will not need cascara to relieve constipation nor nux vomica and Peruvian bark to enable her to eat; and will probably menstruate with little, if any, pain.

Allow me the credit of being honest in my convictions, and try this plan in suitable cases before you sneer me down as a "crank."—G. Law, M.D., in *Denver Medical Times.*

Ustilago Maydis as an Excitant for Uterine Contractions During Labor.—The writer has obtained excellent results by the adiministration of the fluid extract of ustilago maydis in cases of primitive inertia of the uterus. Of six pregnant women, two vomited and could not retain the drug. A third was not influenced by the usual dose. In seven cases, however, its action was rapid and excellent in every way, by giving the patient from thirty to forty drops of the extract at one dose. The contractions appeared, twenty-five to thirty minutes, forty at the least, after the drug had been ingested. These were like the physiological contractions, there being no convulsive or tetanic character about them. There was no contraction of the cervix, and the drug could be given without danger at no matter what time during labor, acting even better when dilatation was already obtained at the time of inertia. Delivery and the expulsion of the placenta were in no way delayed or prevented. The writer was not able to observe any bad results either to mother or child at the above mentioned doses. This drug which has been employed in Germany and especially America for the last twenty years, merits it employment in obstretrical practice. It is far superior to quinine by its sureness of action and does not have the dangers of ergot—Dr. V. S. Gromsdeff, in *Vratch; Annales de Gynecologie et d' Obstetrique; Annals of Gyn. and Ped.*

Tuberculosis of the Ovary and Uterus.—Tuberculosis of the ovary is not frequently met with. If it is quite common to find small caseous foci in the ovary, it is rarer to discover large tuberculosis cysts. At the autopsy of a women, dead fron pulmonary tuberculosis, a cyst, the size of an adult head, was found. This cyst was movable, smooth, of tubercular nature, and what was still more extraordinary, the same preparation presented at the uterus, starting at the fundus, an adenomatous polypus, measuring four centimetres in length, in which tubercles, giant cells, and tubercle bacilli were found. The surface of the polypus was smooth, with numerous cystic granulations under it. The surface of the uterus was smooth. Microscopical examination showed a glandular interstital endometritis. Near the fundus, in the posterior wall, at the point of adhesion of the ovarian cyst to the uterus, a caseous focus the size of a bean was found, and three other small foci extended from this to the base of the polypus. The mucous membrane in this point was diseased, but everywhere

else was normal. The polypus offered the following structure: The epithelium of the surface was almost entirely wanting; more deeply, a stroma, rich in cells, enclosing numerous bands of cylindrical epithelium cells, many of which had undergone cystic transformntion. Near the center of the polypus, these bands of epithelium cells disappeared, giving place to a proliferation of round cells, in the midst of which tubercles and giant cells were discovered. Sections colored by Ziehl-Neelsen method, showed the bacilli of tuberculosis clearly. The tubercles could be traced up to the pedicle, near the caseous foci in the fundus. The processes was, consequently, infection starting from the cyst, gaining the uterine walls and invading the adenoma by the pedicle. —Dr. Max Madlener, in *Annal. of Gyn. and Ped.*

NOTES AND ITEMS

The Micro-Organisms of London Sewage.—During last year an interesting report was made on the results of investigations on sewer air. A fresh report is now forthcoming on the micro organisms of sewage, revealing some noteworthy features. The facts again come out in striking confirmation of the conclusion arrived at in the last report, that the organisms present in sewer air are not derived to any essential extent from the sewage, otherwise they would show to some degree the same relative ratio of micrococci to bacilli. Further, a large proportion of the bacteria of sewage have the property of very rapidly liquefying nutrient gelatine; so large a proportion, indeed, as to make gelatine an impossible medium to employ in estimating their numbers. In sewer air, on the contrary, organisms rapidly liquefying gelatine were found to be practically absent, a fact impossible to explain on the assumption that sewer air is able to take up bacteria from sewage. The number of micro organisms existing in sewer air appears to be entirely dependent upon the number of micro organisms existing in the fresh air at the same time and in the same vicinity. With the advance of the colder weather, and consequent rapid decrease in the number of micro organisms in fresh air, there is a corresponding decrease in the number of micro-organisms of sewer air, although the temperature of the sewer air and sewage undergo comparatively slight variation. The very organisms which are most abundant in sewage were precisely those found to be absent from sewer air. The nature of the organisms in some 1,200 litres of sewer air had been carefully determined, and not once in the course of the experiments was the bacillus coli communis or any of the predominant organisms of sewage found, though the bacillus coli is present in sewage in numbers varying from 20,000 to 200,000 per cubic centimeter. This being the case, it is pointed out that it is infinitely improbable that the typhoid bacillus exists in the air of our sewers. That sewage is a common medium for the dissemination of typhoid is certain, and that sewage-polluted soil may give up germs to subsoil air is possible, but that the air of sewers themselves should play any part in the conveyance of typhoid fever appears from the results of the investigations to be in the highest degree unlikely. It is more and more evident that water supply and, as an incidental result, our milk supply, constitute the chief channels of infection by which typhoid fever is communicated, and this is true also of cholera and possibly of other infectious diseases. Mr. T. Parry Laws, F.I.C., and Mr. F. W. Andremes, M.B., have carried out the investigations, at the request of the Main Drainage Committee of the London County Council. The investigators hold that some of the ill-effects which have been erroneously ascribed to sewer air may be due to subsoil air derived from soil polluted by constant infiltration of excremental matter through a leaky drain.—*Brit. Med. Jour.*

Incompatability of Drugs.—The *Bulletin of Pharmacy* for January contains the continuation of Mr. Frank X. Moerk's instructive paper on the incompatibility of drugs. This is a subject which physicians should study. The rapid introduction of so many new drugs and preparations should admonish us that it would be better to carefully study the resulting compounds that may come from the admixture of some of these than to prescribe them too recklessly. One young man —anxious to be in the lead and fearful of not continually doing something new or different from the rest—lately prescribed a mixture of antipyrin and spirits of nitric ether for the use of a patient, which the more intelligent druggist luckily postponed filling. When informed of this slip—which might have ended seriously for the patient—the physician observed that he did not see how he could have committed such a blunder, and as an excuse stated that he was so everworked and that he was so obliged to draw on his reserve strength, etc., to such a degree that it was a surprise to him that he did not kill some one at times. The real solution of the blunder is to be found in the fact that he simply prescribes too much at random and without taking any pains to fully study the action and collateral properties of the drugs that he prescribes.

We do not blame a man for not knowing everything, but he is criminally blameable for using drugs that he does not fully understand when there are a sufficient number on his list that he is well acquainted with. To prescribe at random and not knowing that which we should know about that which we prescribe, betokens a reckless negligence and as reckless an appreciation of moral responsibility or a heedless ignorance that is as criminal as it is dangerous. It is well enough that druggists educate themselves and can save the patient from the result of such blunders, but a physician should not depend upon such an accidental safety valve for the safety and life of his patient. Mr. Moerk's paper is one

that should be read by all prescribes as it points out many of these incompatabilities.—*Nat. Pop. Rev.*

The Scheming Microbe.

A microbe sat on a maiden's lip, right on its kissiest part,
And murmured, "I'll work that young man off in the highest style of art:
I'll send a raging colony careering through his veins,
And they shall soak his system with a choice lot of ptomaines.
"O, I'm of the choleraic sort and the epidemic brand,
And you may bet the victim knows whenever I'm on hand;
For I raise a rumpus in his guts, like a slowly bursting bomb,
Which only ends as a general thing, when he reaches kingdom come."
Now, him that the grizzly microbe had in its measly, pizen mind,
Was a nicish, youthish laddie of the hottest blooded kind;
Who loved this sweetish, youngish girl with an incandescent vim,
Which only found an offset in the way that she loved him.
Well, on the next sweet Sunday night, this nicish, youngish man
Was seated on the same chair with his darling Mary Ann;
And he hugged until he nearly busted her precious diaphram,
And kissed her sixteen hundred times with a zest of a battering ram.
The microbe had been swapped at least one thousand times, and when
The young man left the ornery beast was still with Mary Ann;
When her beau was gone she finished up by kissing "Puggy Wee,"
And the next day that devoted pup most died of diarrhaee.

—W. C. Cooper, in *Medical Gleaner.*

The Chemical Pathology of Uremia.—In a recent experimental study of uremia, Hughes and Carter have contributed to the pathology of this important condition (*Amer. Jour. of the Med. Sciences*). They conclude that there is one poison, present alike in uremic human blood, in dropsical effusions in uremia, and in dog's blood in experimental uremia; and that this poison is not one of the ordinarily recognized constituents of the urine, as generally believed, but one of whose nature or even existence has not before been recognized. The fact that its action is much lessened after subjection to moderate heat, and that it is not readily dialyzable, seem to indicate that the poison is an albuminous body; while clinical evidence indicates that it is not a constant constituent of the blood, but produces the uremic condition by accumulation, owing to the inability of the kidneys to excrete it, or more rarely by a sudden and enormous production. The order in which serums stand as to their toxicity, proceeding from the most toxic to the least, is, man's the dog's the horse's. This suggests to the writer that the origin of the substance is to be traced to the character of the food, which is more nearly carnivorous with man and the dog and purely herbivorous with the horse, and that its production takes place somewhere in the digestive tract.

The Fat of Women's Milk.—Laves finds (*Zeit. f. Physiol. Chem.*) that the fat of women's milk is very poor in volatile acids and those soluble in water, but contains a large amount of acids belonging to the unsaturated series. The volatile portion is composed largely of carporic, caprylic, and caprinic acids; the non-volatile portion, of palmitic, stearic, and oleic acids, besides which are one or more acids of a lower molecular weight, including, perhaps, myristinic acid. The melting points of the fatty acids is 37° to 39° C.; the melting point of the fat itself, 30° to 31° C. The chemical composition is thus quite different from that of cow's milk.

Th Opium Inebriety of the Chinese.—An educated Chinaman, the Rev. Poon Chu, had occasion to address a San Francisco audience on the comparative evils of alcohol and opium as intoxicants. He stated that he had found one striking difference between the effects of the opium vice among his countrymen and those produced among Americans by alcoholic intemperance: "When the Chinese opium smoker comes home he does not abuse his children and kick his wife; his wife kicks him." This happy hit "brought down the house," and was widely quoted as a specimen of Chinese wit.—*Jour. Amer. Med. Ass'n.*

Medical Books.—Write to A. J. Crawford, 312 N. 7th Street, St. Louis, Mo., for Catalogue of Cheap Medical Books and Journals. Mention the Medical Review.

Tulsa, I. T., September 14, 1893.

Dr. W. Scott Marshall, Centralia, Ill.—

Dear Doctor—I have one of your $16 Russet Bags, bought through Ford & Hickox, Fairland, I. T. I can not speak in too high terms of the Buggy Case Saddle Bags. The mathematical problem of "two cases into one" has been successfully accomplished.

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ORIGINAL ARTICLES

Investigation of Tumor Formation With the View of Developing the Therapeutic Rationale of Certain Toxins in Cancer.

BY GEORGE WILEY BROOME, M D.,

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Read before the St. Louis Medical Society, March 9, 1895.

GENTLEMEN—It is my intention to bring the subjects, indicated in the title of this paper, before the Society in two parts. I have determined to adopt this course for two reasons; and among them I may refer to the pre-prevailing rule which admonishes us to be brief, and the further reason that I have not yet fully formulated the results of my investigations in the therapeutic uses of certain toxins in malignant tumors.

I shall, therefore, at this time, endeavor to present, in the most comprehensive manner that the time will permit, the views held by most modern investigators concerning tumor formation, both in benign and malignant growths, and, in connection with these, refer incidentally to those inflammatory swellings which result from demonstrable microbic causes.

I expect to show in the other half of this paper, when discussing the theory upon which is founded an explanation of the therapeutic rationale of toxins on the cancerous process, that the method, at the present stage of its development, possesses scientific merit. I may add at this point, also, that the clinical effect of toxins upon the cancerous tissue was observed a number of years ago, and the application of the knowledge cannot now, by any method of reasoning, be considered mere outshoot of spontaneous zeal; for the development of this practice involves principles which are based upon well defined scientific deductions.

Without further preliminary explanation, I shall proceed at once with the study of tumor formation and set aside the questions concerning the therapeutic features, until an opportunity presents itself for bringing those before you.

A tumor, according to Cohnheim, is regarded as an increase in volume from tissue proliferation from an embryonal matrix, and which manifests no disposition to disappear spontaneously. Luecke very adroitly defines a tumor as an increase in volume by tissue proliferation without a corresponding increase in physiologic function. Virchow looked upon tumor formation as a local growth of tissue from the *fixed mature cells*, in accordance with his doctrine, *omnis cellula e cellula*. In the light of this view he subdivided tumors into such as have a homologous and heterologous origin; but heterology in pathology has often been misunderstood, inasmuch as it has been applied, as a term, synonymously with malignancy.

A heterologous growth is not necessarily a malignant tumor, and, indeed, only becomes heterologous in composition in an exceptional type, and a malignant tumor—in the old sense of the word—is rarely of heterologous origin. But in the sense in which Virchow used the term, a malignant growth is always of a heterologous nature; that is, tumor tissue occurring in a locality which does not correspond to the type of tissue found in the tumor.

The definition I shall give you will differ in some respects with that given by Cohnheim (General Pathology, 1877), and, in the histologic origin, from that enunciated by Virchow (Cellular Pathology). And while the definition is at variance with those held by the distinguished men whose names I have just mentioned, you must understand that it is a definition which is in perfect accord with the views of the more recent investigators, but views many of which have not yet appeared in any text-book.

In the light, then, of recent pathologic researches, a true tumor is defined as a localized increase of tissue, the product of tissue proliferation of embryonic cells of congenital or post-natal origin, occurring independently of microbic causes, the post-natal cells being derived from pre-existing mature tissue in consequence of injury or disease, and, failing to undergo the normal transformation, may give rise to tumor formation in the same manner as embryonic cells of fetal origin, according to Cohnheim. Formerly, in the differentiation between true tumor and inflammatory swelling, tumor was confounded with inflammatory swelling before the essential

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cause of the latter was discovered; but now these entirely different pathologic processes should be sharply defined. Now that mature tissue and pathogenic microbes can be excluded as etiologic factors of tumor, a well-defined line between a tumor and inflammatory swelling is established. In tumor there is always localized increase of tissue, the result of proliferation of embryonic cells of pre- or post-natal origin. Fetal cells, according to Cohnheim, were not utilized in the growth and development of the body, and the post-natal cells not utilized in the repair of injured or diseased parts; thus constituting a process entirely distinct and independent of the tissue in their immediate vicinity. On the other hand, inflammatory swelling results from tissue proliferation provoked by the action of pathogenic microbes or their toxins upon pre-existing mature normal tissue cells. The incipient pathologic product in tumor is always more localized and better defined than inflammatory swelling. It may be stated here that a benign tumor always remains local, the tissue growth being limited to the primary matrix, but a malignant tumor, while it has a similar local origin, almost invariably gives rise to dissemination by the migration of cells or transportation through the lymphatics or general circulation.

Now as to the elements of inflammatory swelling, we know that they are made up of fixed tissue cells, new cells produced and corpuscular elements. These mingle with the transudation the inflammatory product, outside of the changed capillary wall. The extension of this inflammatory swelling occurs by continuity and contiguity of structure. On the other hand, the tumor product is always permanent and never disappears spontaneously; while in inflammatory swelling the product, whether the result of an acute or chronic process, is composed of tissues which are destined to succumb sooner or later to microbic influences producing the inflammation; besides, the process is attended, in nearly every instance, by violent local or general symptoms, the exception being in the chronic inflammatory infections, known as tuberculosis, gumma and actinimycoses. But in these certain specific micro-organisms have been demonstrated, and hence such conditions must be placed among the infective swellings; and if it should ever be proven that a tumor, either a carcinoma or a sarcoma, has a microbic origin, it, too, must be eliminated from the classification of true tumors and also placed with the infective swellings. But so long as it can be shown that they do not originate *de novo*, but are always an integral part of the organism, the product of tissue proliferation from a matrix of embryonic cells, and their growth and development from pre-existing immature tissue elements, we must regard them as properly belonging to the classification of true tumors. From this standpoint we are enabled to account for the fact that a tumor in one case becomes a benign growth, and in another a malignant; for if the cell growth is arrested near the completion of the process of differentiation, then the starting point of a benign epithelioma is furnished. On the other hand, if this cell growth is arrested at an earlier stage of differentiation the proliferation will result in tissue of a lower type, and the resulting tumor will be a carcinoma. The same holds true of meso blastic tumors—the more imperfect the differentiation the greater the tendency to the production of a sarcoma than a fibroma. Advancing a step farther, we find that *the tumor cells which compose the tumor mass always correspond in type to the embryonic cells from which they are derived;* that is, the function of the differentiation of cells is always limited to the part or organ to which they belong, no transition from one type to another takes place; for the law of the specific genetic nature of cells prevails throughout. So that, in concluding the discussion relating to the origin of tumor, we may repeat that the product is either tissue proliferation from a matrix composed of embryonic cells of congenital or post-natal origin, aroused into activity by general or local physiologic stimulation, or congenital or acquired abnormal conditions in its immediate environment.

In studying the morphologic appearances of the tumor cells, we find the shape of a tumor cell corresponds very closely to the cells of the organ or part in which the tumor originated. In a benign tumor the development of the cell is nearly perfect. This is illustrated by comparing the cell of a lipoma with the cells in normal fatty tissue; no difference can be distinguished microscopically; but the cells of malignant tumors do not attain maturity. The cell of the sarcoma, however, may be distinguished by the greater number and size of the nuclei, showing greater vegetative activity. But the morphologic, specific cancer cell of the older textbooks may be held responsible for many errors in diagnosis; for it is now known that the microscope can not be relied upon alone in distinguishing between the pathologic product and the normal tissue. This may be illustrated further by comparing the non-malignant epiblastic tumor and the middle strata of the epidermis. The morphologic variation in the cell of the malignant tumor may be due to various causes; for example, the caudate prolongation of many cells may be the result of rapid cell growth and pressure from without, and the polymorphism of these cells may depend upon the cutting in making the sections.

Respecting the pathology of tumors, it is clearly demonstrated that tumor tissue may be subject to the same degenerative changes as normal tissue; that is, tumor tissue may be altered by accident or disease, with, we should say, a milder vulnerating influence than normal tissue, for tumor tissue in reality constitutes a *locus minoris resistentiæ* for direct or indirect infection with pathogenic microbes. When inflammation occurs in a tumor *unmistakable proof of infection is furnished.* This may occur with or without a tangible infection atrium. But the usual avenues of infection are those which are furnished in normal tissue; that is, the pus microbes find their way through an abrasion, cut, ulcer, or the infection may be produced by microbes floating in the blood current. Tumor tissue must of necessity possess

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a very low resisting power to inflammation. A benign tumor may be completely destroyed by inflammation and ulceration, but while malignant tumors are often the seat of infection and inflammation, they never become obliterated by this process. The ulceration of a tumor may be the result of accident or due to inherent causes, or from infection after destruction of overlying tissue by pressure, atrophy or otherwise. Of course, the clinical behavior of such ulceration depends upon the size of the ulcer and the character of the tumor. We know that ulceration communicating with a suppurating cyst by a fistulous tract will not heal until the epithelial structures lining the cyst wall are destroyed by suppurative inflammation, removed with the knife or destroyed by caustics. Defects of benign growths caused by inflammation, caustics or incomplete removal, heal, as a rule, in the same manner as wounds in normal soft parts; that is, by granulation, cicatrization and epidermization. But in the specific ulcers, such as appear in surface carcinoma, the initial defect usually occurs in the center of the growth, and when the crust is removed leaves a raw, bleeding surface, which, as a rule never heals, but possesses an intrinsic tendency to enlarge. In glandular carcinoma and ulcerating sarcoma the cause of the ulceration is due to conditions inherent in the tumor. These primary ulcers are frequently followed by sloughing, suppuration and putrefaction, with deep excavation in the center. The secretions stagnate, putrefy and stink—more particularly in the glandular carcinoma, while in the ulcerating sarcoma the tumor tissue often projects beyond the borders of the skin in the form of a fungus mass, representing the fungus hematoides of the older authors.

In discussing the etiology of tumors it may be said that influences which enable latent cells to assume active tissue proliferation are the etiologic factors in the production of tumor tissue; for, as has been stated above, benign and malignant tumors always originate from a matrix of embryonal cells of a congenital or post-natal origin. A matrix of embryonal cells must, therefore, be considered the essential cause of tumor formation, all other causes being inadequate to produce a true tumor; but such a matrix may remain harmless in the absence of congenital or post-natal exciting causes. In a certain sense the majority of tumors are congenital, so far as the essential matrix of embryonic cells is concerned, but the essential tumor matrix is not congenital when the tumor develops from a matrix of embryonal cells of post natal origin. But it is somewhat astonishing, as well as interesting, to know that congenital malignant tumors are very rare. So far as I have been able to find, there have been but two cases reported; one by Ahlfeld, in a child of three and one-half years of age, a case of sarcoma of the genitals; and the other, a case of congenital atresia of the rectum, in a new-born infant. I have an indefinite recollection of such a tumor having been reported before this Society some years ago.

Respecting heredity, we no longer speak of tumor dyscrasia. We cannot, however, wholly ignore influences of heredity; for facts are recorded which show carcinoma of the uterus in three generations—grandmother, mother and daughter; a carcinoma in another family—mother and five daughters; a cancer of the lip occurring in another family—mother and five daughters. But in inherited tumor formation, the essential cause, must be present just the same; that is, a matrix of embryonic cells, together with a lack of resistance of the person or of the tissues in the immediate vicinity of the matrix to retard the tumor—that is, the absence of physiologic resistance. Heredity, therefore, implies, in the light of this knowledge, a matrix of embryonic cells suspended or diminished by physiologic resistance.

Another important fact, which must be borne in mind respecting the etiology of malignant tumor formation, is, that experimental transplantation of malignant tissue has proven that it will not grow in normal tissue, for tissues in possession of adequate physiologic resisting power prevents its growth and infiltration, the impression of malignancy manifesting itself at the grafted point only faintly, the graft itself being soon removed by the wall of granulations. On the other hand, experimental researches have proven conclusively that grafts from benign tumors may take hold and grow, but the two essential factors named must be present wherever tumor grows. One of these consists of an embryonal matrix composed of embryonic cells, and the absence of this matrix precludes the possibility of tumor formation. The other factor is a suspension or diminution of physiologic resistance. Only the presence of these factors enables the matrix to proliferate tumor tissue, and this latter furnishes all that is embraced in what is spoken of as an hereditary predisposition to tumor formation. A person born with essential tumor cells becomes the subject of tumor formation, then when physiologic resistance is diminished by accidental pathologic conditions at seat at which they exist, or when no such conditions occur to the person, the embryonal matrix may escape transformation into tumor tissue, the cells composing the embryonal matrix remaining in a latent state throughout life.

Both race and climate play an important part in the etiology of tumor; but, while investigations in this direction would prove exceedingly instructive, time forbids us from taking up that part of the subject. But age, as an etiological factor, furnishes us an interesting phase. At puberty, for example, the period of post-natal life when the generative organs assume active physiologic existence, occur the mesoblastic tumors, fibroma, osteoma, sarcoma. Between the years of fifty and seventy come malignant growths from the epiblast and hypoblast, and also the transformation of benign growths, such as moles, papilloma, warts, etc., into malignant tumors. Why special tumors should manifest a special predilection for these respective periods of life is a circumstance not clearly understood, but a very important fact in respect to matters to be discussed in the other half of this paper. An epithelioma in early

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life may be considered anatomically as simply a superficial increase of the epidermic layer, but later in life, when the physiological boundary line is rendered permeable to migrating epithelial cells—that is, when epithelial remnants from a mole, papilloma, or wart are found in places where they have no legitimate existence—it is then an epithelioma.

The topographic distribution of carcinoma illustrates the fact that it develops most frequently at the seat of irritation; for example, at points irritated by clay pipes in smokers, coal dust in chimney sweeps, foreign bodies in the tissues or hollow organs, carious teeth, esophagus by the use of alcohol, catarrh of the mucous membrane of the nose. If a tumor matrix is within the limits of an inflamed area, an area exposed to irritation, the embryonal cells of the matrix may be aroused from their dormant condition into active tissue proliferation and give rise to tumor formation, because of the diminution in the physiologic resistance of the tissues in that particular area. The popular fear of the contagiousness of malignant tumors however lacks foundation. Negative results have been demonstrated in thousands of cases, and there is no authenticated case in which the disease was transmitted from man to man or animal to animal.

The clinical behavior of benign and malignant tumors is determined largely by the nature of the primitive matrix, the anatomical structure, the physiologic importance of the organ affected and the relations of the tumor to the adjacent tissues. A point of great interest respecting the clinical aspects of benign and malignant tumors, as has been stated, is the fact that embryonic cells of the lowest degree of development result often est in the formation of a malignant tumor; but the type of a tumor depends upon the germinal layer from which the matrix is derived. For example, in a matrix from the middle germinal layer the resultant tumor would be of the connective tissue type, either benign, mesoblastic or sarcomatous. In a matrix of embryonic cells from the epiblast or hypoblast, the type of the tumor would be either benign, epithelial or carcinomatous, according to the intrinsic capacity of the cells and physiologic resistance.

Another clinical aspect of great importance is that benign tumors remain limited to the part or organ primarily affected, while malignant tumors ignore all boundary lines. Certain tumors show a predilection for certain tissue and organs—fatty tumors occur most frequently in the panniculus adiposus, enchondroma in the long bones, sarcoma in the connective tissue, glands and bones, carcinoma in the muco-cutaneous orifices and mammary glands. In pure benign tumors the most important clinical feature concerns their slow growth, and that they are always surrounded by a limiting capsule, two distinctive anatomic features of benign as compared with malignant tumors. Benign tumors, therefore, can be enucleated, but if the capsule of a benign tumor, owing to the anatomic peculiarities of the surroundings, sends prolongations into the adjacent tissues, as is sometimes the case, parts of the tumor may be overlooked, and from these recurrences take place. Incomplete removal of a benign tumor is usually followed by recurrence unless the remaining part or parts are destroyed by suppurative inflammation or degenerative changes. Furthermore, in consequence of encapsulation of a benign tumor its mobility is an important clinical feature, but this mobility may be diminished or destroyed by overlying structures. When tumors are attached to bone they, of course, are immovable from the beginning. When a tumor, therefore, possesses mobility this fact becomes valuable in differential diagnosis. For example, adenoma of the mammary gland is always moveable, but carcinoma of the mammary gland is quite immovable. The most important aspects of the malignant tumor to the surgeon consist (1) of rapid growth; (2) absence of limitation of growth; (3) local infection; (4) regional infection; (5) general infection; (6) frequency of recurrence after removal; (7) intrinsic tendency of the tumor to destroy life. The recurrent tumor, however, always resembles, both histologically and clinically, the primary tumor. The regional dissemination of a sarcoma takes place by growing in the direction of the fascia, blood vessels or nerve sheaths. General infection of a malignant tumor takes place by metastasis, but we must never lose sight of the fact that all malignant tumors are primarily purely local, and become general only by the dissemination of tumor cells through the general circulation directly or by their entrance from the primary tumor or the regional glandular tumor into a vein. And, hence, all malignant tumors, if accessible, are, at one period of their lives, amenable to successful surgical treatment.

But I wish, in conclusion, to emphasize the confidence I have in the belief that even in the advanced stages of cancerous process, when that condition has been reached which places the case beyond the scope of legitimate surgical interference, we shall soon find a rational basis for the successful application of scientific therapy—in many of these cases which we are compelled to look upon as inoperable, and, in consequence, have heretofore abandoned as incurable.

Finally, I wish to add, that, as many of the essential points of this paper are based upon the labors of such reliable and competent observers as Johannes Muller, Virchow, Cohnheim, Bar, Luecke, Maas, C. P. Weber, Williams, J. Bland Sutton, Leopold, Wolff, Kauffmann, Klebbs, Councilman, and others, I must of necessity adhere to the fundamental principles, respecting tumor formations, enunciated by them; and, while this is the case, I am aware that in this epoch of microbiology it is both natural and, in a measure, rational that many earnest observers should apply to cancer those theories which have proved most satisfactory in the investigation of other diseases, and to regard cancer as of microbic origin. Such theories, indeed, would seem to be especially applicable in that form of cancer which occurs in advanced age, for here some of the clinical aspects appear to be analogous to diseases which

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we know are dependent upon infection with parasites. But until such theories depend upon something more than mere inference they can have no scientific foundation. Then, on the other hand, to hold, as I do, that true tumor formation consists of a localized increase of tissue, the product of tissue proliferation of embryonic cells of congenital or post-natal origin and occurring independently of microbic causes; and, in connection therewith, as I am prepared to do, attempt to preve that the toxic products of certain micro-organisms possess therapeutic power of high scientific merit, over the malignant form of tumor, it is not altogether unlikely that I may be charged with advocating a surgical heresy; but I am sure that I will be able, when the opportunity presents itself, to show that such a charge could not receive the support of scientific argument.

Thirty-Five Cases of Surgery of the Stomach.—By Dr. Montaz (Grenoble). These cases include six gastrectomies, six gastrotomies, ten gastro-enterostomies, two enterostomies, and eleven exploratory laparotomies.

The six gastrectomies resulted in three cures and three deaths, the last dne to collapse following the operation. Of the others, two mada a rapid recovery; the other was under treatment for a year. The operations were done for small and movable tumors. The operator readily isolates the tumor by tearing away with the fingers the omentum and the gastro-hepatic omentum, places two Richelot clamps faced with rubber at a sufficient distance from the tumor, and cuts away the tumor-mass between them. The divided edges are then sutured after the manner of Doyen.

The six gastrotomies, done for cancer of the cardiac end when complete ablation was impossible, gave six operative cures. In this operation Montaz follows exactly the technique of Terrier, but in spite of the narrowness of the orifice, he has always noticed a discharge of gastric juice and a partial digestion of the wall. He has vainly tried all sorts of remedies to prevent this digestion, the "steresol of Berlioz."

The ten gastro-enterostomies gave seven cures and three operative deaths. All the latter was due to collapse. The anterior operation of Wolfler was always used. Three of the patients who recovered have regurgitation occasionally after eating. The lateral position lessens this trouble, and Montaz believes that the duodeno jejunostomy of Jaboulay is a useless and serious complication.

Two enterostomies were performed upon patients suffering from extensive involvement of the stomach in cancerous growth, and in whom alimentation had become impossible. The jejunum was identified, and an opening in its walls was made just as in a gastrostomy. Through this the patients were fed, and both of them lived some months.—*French Congress of Surgerg; Annals of Surgery.*

EDITORIALS

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All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and as a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st.

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Good for Governor Stone.

A very laudable act is the veto of our Governor which he has placed on the idiotic law of the Legislature of our State recognizing osteopathy as a legitimate branch of medicine. Although the public has long since ceased to be astonished at the imbecility of State Legislatures, as it has at the rascality and venality prevailing in both houses of Congress, the law just vetoed by Governor Stane is one of the most glaring examples of legislative perversion.

Osteopathy, this most stupendous of the latter day fakes, the result of the crazy workings of a fellow cursed with an arrest of brain development, teaches that all diseases are due to dislocations. Correct them and the disease is cured. Many remarkable recoveries have been observed and are sworn to by all observers. That the cases recovered are really those of some forms of hysteria and allied conditions, is plain enough to the intelligent physician, but not at all to the intelligent layman. Any other sort of fad or fraud will cure them. Of course this will never be demonstrated to the wonder craving hysteric or to her or his family who are hysterical themselves or daft on general principles, though, or perhaps *because*, they may be well-to-do or even rich.

The action of the Governor is an enlightened and creditable one and will be remembered by the profession of our State.

The Medical Storm Center.

Since the recent action taken by the St. Louis Medical Society, indignation has run high in that small circle of malcontents and disturbers on general principles, who have been figuring so prominently before the medical and lay public for the last twelve months and more. A new storm is brewing and a low barometer with prospective danger of cyclonic explosion calls for the display of the black flag.

As a side show to this coming revolution of the weak (in mind and body) against those in power (intellectually, morally, numerically, legally, etc., etc.), the organ of chronic defeat, the *Medical Lookingglass* promises to do up the editor of this paper, as it has time and again before. We are as ready for the fray as ever. Lay on McIsaac.

CORRESPONDENCE

A Severe Case of Sciatica.

Editor MEDICAL REVIEW.—I would like to present the following case with the hope of receiving suggestions in regard to treatment either through the REVIEW or by private correspondence.

A farmer, aged 40, has always labored hard and has enjoyed fairly good health, (except he suffered from intermittent fever for a considerable period while living in Illinois ten or twelve years ago, and was "always" inclined to constipation), until about two years ago, when he began to suffer occasional attacks of sciatica. Since that time the paroxysms have increased in severity and frequency until during the last three months he has scarcely been free from pain. There is, however, a marked abatement of the intensity of the pain during the daytime, and the element of periodicity is quite prominent—the paroxysms recurring each night about midnight.

Recently there was a tendency to the involvement of other nerves—the lumbar, intercostal, and even those of the upper extremity and face. Patient suffers constantly from constipation and seems to have used every known laxative or purgative drug until he has acquired almost complete "immunity" from their action. His suffering, though intense, seems not to have seriously interfered with nutrition; appetite, weight and strength being but slightly impaired. I have fought the malady from the malarial standpoint, and have besieged the alimentary canal from both ends; besides employing every other line of treatment suggested in my text-books (almost), with only slight temporary relief. I am at my wits end. Have thought of nerve stretching but it would not be practicable to stretch all the nerves of the body, which in this case might be necessary. Advice in regard to the management of this case will be most gratefully received. C. I. PEASE, M.D.

Linn Grove, Iowa.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, March 9, 1895; the President, F. D. MOONEY, M.D., in the Chair.

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DR. G. WILEY BROOME read a paper (see page 261) entitled,

INVESTIGATION OF TUMOR FORMATION WITH A VIEW OF DEVELOPING THE THERAPEUTIC RATIONALE OF CERTAIN TOXINS IN CANCER.

DR. WILLIAM JOHNSTON said that since Virchow wrote on "Cellular Pathology" the origin of cancer has been considered a local one. The question of the origin of tumors was debated in the 17th and 18th centuries, and it was decided that it requires a predisposition of the constitution, a state of altered nutrition in the blood. Speaker believes, with John Simon, of London, in the humoral origin of cancer. If you derange the nutrition of a cell you have an abnormal development. Manifestly, if this deranged nutrition is systemic, the removal of the growth by cauterization or excision will be of no avail, the growth will certainly reappear.

DR. EMORY LANPHEAR.—The definition of a tumor, given by the essayist, does not differ materially from that given by Cohnheim, as presented in Warren's recent admirable work on surgical pathology, that all tumors arise in abnormal conditions of embryonic cells, the immediate cause of development, after a dormant period which may extend over a lifetime, being an increased blood supply to the part by reason of inflammation or otherwise, the embryonic character of the tissues found in sarcoma having been the first thing to suggest an origin in the remains of fetal structure. While inflammation does unquestionably play an important role in the life history of some forms of tumors it seems to me that the author of this paper lays too great stress upon it, especially in regard to its etiologic importance. The presence of inflammation, or of pus organisms, has far less to do with the development of these growths than he would lead us to believe—an increased local hypernutrition, or continued hyperemia, from any other cause, being equally conducive to the rapid growth of tumors or cancers, as illustrated in the effect of pregnancy upon ovarian tumors and scirrhus of the breast.

The same is true of the position he assumes in regard to the transformation of benign into malignant growths. The trend of opinion among surgeons is to extirpate all tumors, however innocent they may appear to be, because it has been shown that even the most benign growths may, under certain circumstances not yet well

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understood, take on a malignancy. How this transformation takes place, we are not prepared to explain in the present state of our knowledge of the pathology and clinical history of tumors and cancers; nor does the paper fully explain these facts which are based upon clinical observation.

But there are two or three other, far more imortant assertions of my respected colleague, which can not be allowed to go unchallenged. There are three other points which have been observed clinically, that are revolutionizing our ideas as to the pathology of tumors and cancers:

1. It has been asserted by good authority that cancer has been transplanted by the knife. Thus, Thiersch lays down the rule, that recurrence after extirpation depends, first, upon the growth of a new tumor; second, upon non-removal of some part of the neoplasm; and third, upon inoculation, at some point, of living tumor cells during removal of the tumor. Instances of the appearance of cancerous nodules in the line of incision in removal of mammary scirrhus are numerous and are regarded as being due to the knife's entering diseased tissue during the operation; and Billroth records a case where implantation of cancer cells in the abdominal cut took place during removal of a malignant tumor of the pylorus. Such occurrences are so well authenticated, that the law has been given: Cut wide of the diseased tissue, the knife must not enter the cancer, a rule almost universally followed by operators.

2. In spite of the essayist's expression to the contrary—in which position, I believe, he is supported by Ziegler alone—I think it is well demonstrated that cancer can be inoculated or transplanted from one person to another under favorable conditions. Tillmann says positively that such a transmissibility has been proved in the case of both animals and man by experimental and clinical observations. Novinsky and Moran have successfully inoculated rats and mice, securing not only local cancerous disease, but metastatic foci as well. Does the essayist wish us to undertand that if the carcinomatous tissue has been transplanted under strict asepsis, it would have been absorbed and have proven inocuous? And that the success in transfer depended upon the cocci of pus or inflammation? Possibly this may be true, but transplantation has been effected, without question, in the human subject, as related by Cornil and Frank. Indeed, it is but a few months since, that the Paris Academy of Medicine passed a vote of censure upon two members, who reported the successful inoculation of two patients with cancer juice. Upon such data I deny the assertion that cancer can not be communicated from one to another.

3. The chief clinical fact—and it is upon this that the "toxine treatment" is based—is, that in many instances accidental erysipelas was found to cure sarcomata and check the progress of carcinomata. Now, these three facts have upset the old idea regarding the nature and causes of malignant growths; especially that a contusion might, unaided, produce sarcoma; and that long continued irritation, as a pipe on the lip, might alone lead to epithelioma. Various explanations have been offered. Schleich, for example, said, "All tumor formations are an infection originating within the organism—a cell becoming infectious by the mere irritating." Put Ball and Winniwaerter proved that this *alone* is not enough, there must be some specific cause besides. J. Bland Sutton, one of the latest authorities on tumors, says, this specific cause is a micro-organism in carcinomata, sarcomata and epitheliomata. The probabilities are, that for these three the etiology is practically the same as of tuberculosis; the trauma or other irritation sets up a *locus minoris resistentiæ*, and the specific micro-organism "does the rest."

As for the cure of carcinoma, sarcoma, lympho-sarcoma and melano-sarcoma by the specific toxines of the streptococcus of erysipelas, reinforced by that of the bacilli prodigiosus, I will reserve my remarks until my friend, Dr. Broome, has presented the second section of his paper.

Dr. A. H. Meisenbach also took exception to the views of the author, in regard to the transmissibility and autoinoculability of cancer. Cases have been reported, by competent observers, where cancer was engrafted in different parts of the body by contiguity of tissue, or by the patient himself. Bergmann has reported a case of epithelioma of the lower lip, where the upper one became affected at the point of contact. Speaker himself had a case of carcinoma of the scalp, occurring at the point where the patient would be liable to scratch herself, the inoculation being doubtless carried from a carcinomatous breast. Other well authenticated cases have been reported where the husband contracted carcinoma of the penis from his wife who was afflicted with carcinoma of the uterus.

The theory of the microbic origin of cancer is, as yet, unsettled; and the experiments of Schroeder, with a certain microbe supposed to produce cancer, have yielded no conclusive evidence.

Dr. H. W. Loeb called attention to nasal polypi, which must be considered as tumors and are composed of tissue which has no business in the nose. It has no prototype anywhere in the human body, except in the umbilical cord, never becomes malignant, and it is said, never can become malignant. Polypi are composed of mucoid cells and are dependent for their formation upon a chronic inflammation. If a general rule is to be made regarding tumor formations, it should be so constructed as to apply to all forms of tumors, and must then be made to include nasal polypi.

Speaker did not think that it is necessary for Dr. Broome to prove all he has attempted in order to show that the toxines of the streptococcus erysipelatosis and bacillus prodigiosus have some efficacy in the treatment, particularly since he had followed the investigations of Dr. Coley and Dr. Walter Johnson. A case reported by the latter observer is of particular interest, since he succeeded in completely removing a sarcoma of the

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palate, which had been declared hopeless, with antitoxines procured from Dr. Coley.

Dr. W. B. Outten does not believe in the transmissibility of cancer, the action of the French Academy notwithstanding. Two or three cases of that kind do not prove anything definitely.

Regarding the treatment of cancer referred to by Dr. Loeb, he said he had had some experience with it in a case of sarcoma of the leg. The substance was obtained from Dr. Coley direct, and the patient received two injections. He died in 48 hours. By way of contrast, he cited another case of sarcomatous growth of the abdomen, extending from the pelvis on the right side almost up to the liver. The diagnosis was definitely established and the tubercular element positively excluded. Laparotomy was performed, but it was impossible to attempt removal, so the abdomen was again closed, no section of the growth having been taken. The patient was expected to die. A year later he was again examined and the growth had entirely disappeared.

Speaker believed that the profession is still completely in the dark with regard to diagnosis in this trouble, particulary when it is located in the abdominal cavity. He believed many cases had been cured and will continue to be cured by laparotomy where no attempt at removal is made. He had read Coley with a great deal of trouble and patience, and was very much dissatisfied, because, in a certain class of cases, complete failure followed attempts at giving relief.

Speaker did not wish to be understood as opposing the use of the microscope, but he had tried in vain fo years to derive some satisfaction from its use. He is inclined to share Dr. Johnston's views in this regard, and said that some doctors can, from the clinical posture, make as good a diagnosis as any microscopist, although they may not understand the first principles of a microscopic examination.

Dr. Robert Funkhouser said it looks rash for anyone to discredit what such authorities as Cohnheim say, but he had never felt satisfied with the theory advanced as sufficient to account for the different tumors. To accept that theory you would be obliged to accuse Nature of being at fault in very many cases; of leaving behind cells which might cause the future organic trouble.

Nothing has been said so far in this discussion, in regard to the change from a benignant to a malignant tumor. For instance, there are cases on record where syphilitic ulceration has assumed a cancerous change. It would hardly be correct to suppose that Nature had left some embryonic tissue at this place where the syphilitic ulceration had occurred. Other cases are on record where tuberculous ulcerations have changed to cancerous. He did not believe that it is necessary to presuppose that there is some embryonic tissue in the body, whether pre-natal or post-natal, but that a chronic inflammation is in itself sufficient to cause the changes that we find taking place clinically. This is demonstrated in cancer of the cervix uteri.

Speaker believed, with Dr. Johnston, that the profession is still in the dark as to the exact cause of cancer. He believed that there is a tendency to cancer formation handed down in a family through a number of generations, and that many members may become successively afflicted. We can not ignore the investigations of the Italians, who have demonstrated that a number of toxines are found in the body which will give rise to symptoms resembling arsenical poisoning. These toxines, whether due to micro-organisms or to chemico-physiologic action, probably act as irritants, and as such may constitute a causative factor in cancer. We know very little about the formation of these toxines in the system at present, but it is possible that future investigations may give us some definite basis to reason from.

In the use of the toxines we must be careful to determine how many conditions are to be met in the treatment of a disease. We know that the antitoxine of diphtheria has no effect in mixed infections, particularly where the toxines of the pus cocci are to be neutralized. Some authorities consider the streptococcus erysipelatus and the streptococcus piogenes as indentical, and that might be the reason why the addition of the bacillus prodigiosus to the toxines of the streptococcus erysipelatus renders the latter so efficient in antagonizing sarcoma. Possibly we will eventually find a "shot-gun" prescription of antitoxines whereby we may be able to cure any disease that we may encounter.

Dr. I. N. Love shared the views of Dr. Outten, in regard to the diagnosis of cancer by the microscope. The microscopic diagnosis of cancer is far from being definitely established, and it is doubtless true that a thorough clinical examination by a careful observer will lead to more definite results than a diagnosis by the microscope alone. But the rule applies to cancer as it does to other diseases, we should avail ourselves of both methods.

He believed that the neurotic factor had a profound effect upon the disease. General Grant's case is of interest in this connection. His was a case like many others—the result of long worry, great sorrow and depression dependent upon financial reverses. A similar case was that of a woman, 62 years of age, with a epithelioma of the lip. It was not large, but evidently increasing, and was therefore removed. She was an intensely nervous person, continually fretting and harping upon trouble. The incision healed by first intention, but the trouble recurred in a few months and the patient died.

A second case was that of an old man, 78 years of age, who had a very pronounced epithelioma, which was also removed. It has not returned although ten years have elapsed. This patient was of a different temperament, having been a constant user of opium which has gradually produced a tranquil state of mind.

Speaker thought that the relation between syphilis, tuberculosis and cancer certainly does exist, and every case of epithelioma should receive antisyphilitic treatment, based upon the possibility of an error in diagno-

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sis. The history counts for very little, as the patient may have become infected without his knowledge, and the treatment should be employed in every case of suspicious looking ulcer.

Dr. Hugo Summa said that an argument based upon the definition of a cancer as given in the 16th, 17th or 18th century must be abandoned, since what we signify by cancer at the present day is entirely different from what was implied by that term then.

Speaker denied that there is a single case on record up to the present day, where anyone has succeeded in inoculating cancer to such an extent as to produce the cancer with all its clinical features, either upon an animal or upon a human being. Where the transplanting was done it grew a little while and then it was destroyed and absorbed.

He agreed with the views of Drs. Outten and Love, that the microscope shows the histological structure of a tumor, but does not directly decide its malignancy.

In regard to the theory as to the origin of cancer, Dr. Broome has accepted Cohnheim's theory as the only correct one; but he has extended it. Cohnheim applied his theory only to malignant and teratomatous tumors. He never said that benign tumors are due to the development in later life of embryonic cells. We must also take into consideration that his whole theory was hypothetical and problematical, and has never been demonstrated. Besides, towards the end of his life, Cohnheim gave up his theory almost entirely; a fact which he admitted to his chief assistant Prof. Weigert, but which was never published.

For years and years two theories were opposed to each other; that of Cohnheim and that advanced by Prof. Thiersch, who considered cancer as caused by irritation of the lips, rectum, pylorus, mammary glands, etc About five years ago, Dr. Scheuerlen thought he had proved the bacteritic origin of cancer, but his observations were incorrect. In the meantime the protozoitic theory came up. In the examination of cancer sections it was found that the cells included certain granules which showed a special affinity to aniline dyes, and the idea was gradually advanced that the granuli were protozoa. For some time afterward the literature was filled with articles giving this theory, and stating that in every case of cancer, cancer cells could be found enclosing protozoa.

During the last three months two publications have been made by Dr. Kahane, of Vienna, in the reports of the Academy of Science of Vienna, in which he asserts to have found the bacillus in every case of cancer; more than that, not only in the cancer, but in the blood as well.

The statement made by Dr. Funkhouser, that sometimes a syphilitic ulcer assumes a cancerous nature, must be taken *cum grano salis*. Speaker was not aware of the fact that there was ever a case observed in which syphilis and cancer occurred in one and the same person. Cases do occur in which tuberculosis and cancer exist in the same patient. Tuberculosis of the lung is frequently associated with cancer of the alimentary canal.

Dr. George F. Hulbert had no reason to criticize Dr. Broome's definition of tumors, but considered that part which relates to their development from embryonal tissue, either pre-natal or post-natal, merely an assumption. He can not prove it, and has not proved it. The recurrence of a tumor at a different site, by implantation, in the same individual, does not demonstrate its transmissibility to other persons. We can readily understand the causes and influences at work in a patient in whom a tumor has occurred, and how a traumatism, like an abdominal incision, which disturbs the local nutrition, might establish the condition necessary for the development of the tumor at this new site. We are dealing with the same organism, subject to the same influences and, no doubt, of the same tendency. If the implantation is made from one individual upon another organism and the growth appears under these circumstances, we would be justified in accepting the theory of implantation as proved.

Speaker believed that Dr. Broome had not gone deep enough in his search for the real underlying principle of tumor formation. We are not dealing with the structure of the human organism alone; we are dealing with an underlying chemical energy which is the cause of function, of tissue and of the differentiation of tissue.

We can not comprehend the union and blending of the spermatozoa and ovum merely as an accident due to their being placed together in a particular locality, except when viewed from the standpoint of chemical affinity which exists between these two bodies which, by their union, evolves new potentials and phenomena of function and structure. Following the phenomona from this initiative on these lines from the beginning, we can understand the meaning and possibilities of the modification in the chemical energy that is at work in protoplasm; we can account for the differentiation of tissue and the formation of different organs and organisms. If we assume this theory to be correct, and that these chemical influences are constantly at work, it is absolutely irreconcilable to suppose that embryonic tissue could be carried along, under these circumstances, to any part or point of the life of the organism and retain its separate and distinct character from the surrounding, fully differentiated, tissue; unless we suppose that it is derived from white blood corpuscles, which are the cells approaching nearest to embryonal tissue in the fully developed body. If we accept the theory of chemical energy we can understand why it is that irritation sets up a disturbance and modification, and develops changes in tissue which are impossible in a perfectly adjusted chemical or physiological state, or with a perfect nutrition. It will also explain what we mean by heredity, and why we are so much more liable to have tumors with especial and characteristic elements at the different ages of the human organism; as well as permits of an intelligent concept for morpholo-

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gy and malignancy. We can account for the different kinds of tumor formation, by accepting, as we must, for the time being, the assumption that they may be due to the presence of infecting organisms, each variety of which modifies the chemical energy at work within any given point or part of structure of the organism involved, in that a change in environment (chemical in character) is produced at this point or part and may operate upon any or all the elements resident therein; establishing thereby new adjustments and potentials (chemical in character) which must produce changes from the normal. These may be con- or destructive in character; proliferative or degenerative of the various types. The environment may be such that it may affect the germinal, fixed or differentiated tissue. So, too, can any influence, such as irritation, trauma or heredity, act as exciting or predisposing factors in accomplishing the necessary chemical environment at any given point or part of structure, and the change affect any or all the elements therein. In all probability, as our knowledge becomes greater and more exact, we will find that these latter are predisposing, and simply pave the way or give the opportunity for the entrance and activity of some influence that contains within itself the power to do work and maintain the influence thereof. It is difficult to conceive of irritation, trauma or heredity as of themselves maintaining environments potent enough to accomplish the modifications needful for tumor plasms, for these must depend upon the energy of the organism to which they are applied, or are resident in, with no creative power within themselves; while the organism, the parasite, while dependent in a certain sense upon the organism affected, it is in the sense of food only, and has within itself the creative power by which the modification in environment shows a greater probability of maintaining its potency, and gives a clew to the wonderful characteristic phenomena of all tumor plasms; namely, the prodigious, merciless proliferative evolution of tumor structure. This change in environment applied to germinal tissue would certainly give the sarcoma; the expenditure, being a minimum, would leave a large share of the possibilities in energy resident in the organism affected; and, as a result, we would expect the young and susceptible age, with its strong nutritive phenomena to draw upon, with the tumor product pronounced and massive. Applied to the fixed or differentiated elements, we would expect in middle life, the connective tissue plasms with moderate products of mass, with a higher or closer progress toward the normal type. In the aged, the epithelial and malignant; malignant simply for the reason that, if permitted at all, they must follow the source of food supply, and thereby infiltrate and penetrate to better supplied soil, as well as the positive influence of the *locus minoris resistentiæ*.

For these reasons and this philosophy, we challenge the essayist's definition, as well as his logic, assumption and dogmatism, and desire to emphasize the fact that in studying and comprehending tumor plasms we must start, not with structure, but with the underlying energy that creates structure; and any logic or sequence which is at variance with the laws and principles of the cosmos, of which structure is a creature, can not but hope to receive its full mead of criticism, and be rejected by those who are seeking the truth.

Dr. G. Wiley Broome had presented the paper in order to determine, if possible, where we stand with reference to the origin of tumor formations. This is a very important point to determine before we consider therapeutic measures of any kind.

While Virchow swept away the old humeral pathology of tumors, advocated by some gentlemen here to night, he never did advocate the theory of embryonic tissue proliferation. Cohnheim did hold that they are developed from the matrix of embryonic cells, and that is the theory generally advocated to-day.

Speaker's object was to present his ideas as to the formation of tumor tissues, the origin of the primary matrix, and how the resulting proliferation might terminate in a malignant or benign growth. He did not believe that a tumor formation had any connection with microbic origin.

Dr. Meisenbach.—Can you prove this?

Dr. Hulbert.—I can prove it by the fact that it can not be disproved. I can prove it by the fact that the proliferation of mature tissue cells goes to the formation of new tissue, to the reparation of a wound; whereas, the morphology of a cell is not determined until after it is properly differentiated. When it is proliferated from an embryonic cell it is either perfectly or imperfectly differentiated; and when it is imperfectly differentiated it is a malignant tumor.

If Dr. Outten's case resulted fatally from an injection of toxine it has acted differently from those of other observers. The toxines of erysipelas are harmless; the prodigiosus is as harmless as the serum of a horse.

Dr. Outten asked how it is that other operators have had the same experience, if the toxines of erysipelas are so harmless. In fact, the only man, to his knowledge, who had achieved good results is Coley himself. He got the toxine from Coley himself, and tried it honestly upon the patient. The injection failed to produce erysipelas, and the patient died in forty eight hours.

Dr. Broome could recall no ill effect at the hands of other operators. As far as producing erysipelas is concerned, that never was intended. The streptococcus is eliminated from the toxine, which is perfectly free from infectious germs when used. We should understand this point definitely when discussing the subject.

The Ohio State Medical Society will hold its fiftieth annual convention at Columbus, Ohio, May 15–17. It is intended to organize a special committee on medical legislation based upon county representation. The program is one of high scientific value, and a large attendance is expected. The officers are as follows: President, D. N. Kinsman; Secretary, Thos. Hubbard, Toledo; Treasurer, J. A. Duncan.

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ABSTRACTS

MEDICINE.

Two Cases of Syphilis Having a Bearing on the Question of the Period During which the Disease is Communicable.—This communication is merely a report of facts which I have had the opportunity of observing under such exceptional circumstances as to lead me to the conclusion that they may be accepted as absolutely reliable, and of such a nature as to add to our knowledge of some of the more obscure preblems presented by this protean disease.

They are as follows:

1. A case of transmission of syphilis from the male two years after the disappearance of all lesions.

A gentleman well known to me for years, socially as well as professionally, a healthy, strong, active, and athletic man with a good family history, aged about thirty years—a club man, and what might be called a high liver, although rather abstemious in the matter of alcoholic beverages—presented himself on March 3, 1886, with a well-marked and characteristic primary sore. I had previously treated him occasionally for slight attacks of ecsema; sometimes on the forearms and sometimes on the legs, but never severe or persistent. I frankly stated my diagnosis, told him what he had to expect in the way of prolonged treatment, and encouraged him with a favorable prognosis. I advised total abstinence from alcohol and tobacco, and regular but good living. I gave no medicine, but instructed him to present himself once a week for examination. On June 9, he presented with the typical skin, glandular and throat symptoms, and treatment was then begun. The treatment was at first hydrargyrum cum creta three times daily, which after about three weeks was replaced by protiodide of mercury pills, beginning with a quarter of a grain three times a day and increasing up to a half a grain within a few weeks. This was continued for some months, then a period of mixed treatment—perchloride of mercury and iodide of potassium; then a lull of a month or six weeks and a course of inunctions to the point of commencing salivation; then a rest of a month; then some iodide treatment, and finally a return to the protiodide pills, half a grain three times daily. This whole course of treatment extended over two years and four months, during which he abstained entirely from alcohol and followed out my instructions to the letter. After the first three months of treatment he never had a sign of the disease, his general health remained good throughout, and he frequently declared to me that he never felt better in his life. About the time of coming under treatment he was either engaged or about to become engaged to be married. As his treatment progressed satisfactorily, he became anxious to be married; but I resolutely refused to sanction matrimony within two years and a half of the onset of the disease, and then only with the proviso that he should remain perfectly free for at least six months prior to making his final arrangements. At the end of August, 1888, I fully and unreservedly advised him that he might safely arrange to be married. Outside considerations hurried on the arrangements more rapidly than I had anticipated and he was married on November 24, 1888—two years and eight months from the time at which I diagnosed a fully developed chancre and two years and six months from the time of commencing the treatment. During the month of October he indulged certain festivities in the way of dinners and suppers and champagne, incident to his emancipation from treatment and in connection with his forthcoming marriage, and (as I believe) in consequence presented himself again with a few patches of acute ecsema identical in every respect with his presyphilitic attacks. This soon got well, and I saw no more of him until he came to consult me about his wife. As I have alreary said, he was married November 24. On January 25, 1889, he came to me to consult me about some swollen and painful condition of his wife's genitals, but as I had gone abroad for a couple of months he took her to another medical man, and, filled with remorse as he was, told him the history of his own illness. A dignosis of primary syphilis was made, and a month later (so I am informed by the gentleman who treated her) a characteristic rash appeared, and she was treated with protiodide pills and suitable local applications. Immediately on my return he came to see me, but I could not believe it possible that he could have inoculated her. On April 4, I saw her for the first time. She was a strong and healthy woman, but came of a scrofulous family and had one tonsil removed when a child for hypertrophy. The protiodide treatment had been discontinued and she had about half a dozen raised pustular spots about the neck and shoulders and one very suspicious-looking spot as large as a ten-cent piece in the fold behind the tragus of the ear. This was moist and excoriated and was very suggestive-looking. The superifical cervical glands were all enlarged, and the tonsils and pillars of the fauces swollen and angry-looking. I declined to make a diagnosis in the face of these observations and facts, for the reason that I believed it impossible that inoculation could have taken place. I gave a placebo, and she went away to the country, but returned in about a fortnight with a deeply ulcerated tonsil and a general redness and inflammation of the fauces and pharynx. The skin eruption had greatly increased and was now multiform, though consisting chiefly of isolated pustular spots. I now made a diagnosis of syphilis (in May), and on suitable treatment all these signs soon disappeared. I may say that in order not to excite suspicion no examination of the genital of inguinal regions had been suggested, and as the patient had had no sufficient reason given her to think it necessary to

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continue her treatment it was dropped as soon as the symptoms disappeared, with the result that in August she again appeared with a characteristic iritis.

I have given in this narritive the fullest details in order to show (1) that the husband was properly treated and was, as far as could be seen, free from disease when he married; and (2) that there can be no doubt as to the diagnosis in the case of the wife. For the rest, I believe the husband to have been perfectly honest in the matter and the wife to have been in every respect above suspicion. In my opinion, this must have been a case of blood inoculation.

2. Conception occurring during the period of incubation of the chancre in the male parent—the product being a perfectly healthy, non-syphilitic child.

A. B., a strong, active, and healthy man, thirty years of age, had been under my care in the early part of the summer of 1892 for a chronic urethritis from which he fully recovered. On November 4 he came to me in a state of great anxiety. His wedding day was fixed for November 7, and he was leaving town that evening for the city in which he was to be married. The cause of his anxiety was, he stated to me, the fact that four days previously (October 31), after a prenuptial dinner which had been tendered him, and while semi-intoxicated, he had again exposed himself, and was in mortal dread lest the urethritis should be revived. This fear completely blinded him to the possibility of any other danger. I next saw him on January 16, 1893, when he came to me with a fully developed secondary syphilis and a large indurated chancre. He had not the slightest suspicion of what was the matter. The sore, which had appeared two or three weeks after marriage, he attributed to a tear of the prepuce, and its subsequent induration to neglect and the irritation of repeated coitus. The skin eruption, which had been developing for about a week when I saw him (during which he had been away on a business trip), was the first thing to excite his apprehension. It is not necessary to follow the history of this patient further. The interest of the case is centered in his wife and child.

Careful investigation elicited the following facts concerning his wife:

1. That she had ceased to menstrurte one week before marriage and had not menstruated since.

2. That she was then suffering from morning vomiting and other symptoms which led her to believe that she was preghant (about two months).

Subsequent events proved this to be the case, and her child was born about the middle of August. Conception must therefore have occurred during the interval which elapsed between the inoculation and the appearance of the chancre. It is only necessary to say further that the woman was made aware of the grave condition of affairs by the husband, and willingly submitted herself to careful examination from time to time during her pregnancy (the genitals always excepted), and that at no time up to the present has there been any indication of syphilis. From the time of the discovery of the husband's disease up to the time of delivery she took steadily protiodide of mercury (in pill form), from three-quarters of a grain to a grain and a half daily. She remained in good health, and was delivered at full time of a fine, healthy child, which she nursed for about six months, when her milk failed and she was obliged to wean it. The child (now nine months old) has never shown a sign of syphilis, and is a typically healthy, well-nourished baby.

I regret that I have not had the time nor the opportunity to review the literature of syphilis—now so very extensive—with a view of classifying facts similar to those here recorded, but I trust that these cases may be considered of sufficient interest to justify me in bringing them before the association.—James Bell M.D., in *Journal of Cutaneous and Genito Urinary Diseases.*

Therapeutics of Phenacetine.—Phenacetine seems to be up to this time the safest and most reliable remedy we have for reduction of temperature, and controlling pain of a nervous kind. It does not take the place of morphine in acute pains of an inflammatory nature, but in neuralgic pains it is swift in action and hardly ever disappoints your expectation; at the same time it is tasteless and can be given dry on the tongue, and is hardly ever vomited. I have used it for the last six years to the exclusion of any of the other coal-tar derivatives and found it satisfactory and reliable in all respects. The dose of 8–10 grains at a time I have never exceeded, usually combining it with one grain caffeine to the dose. It is purely, however, a symptom medicine, and if relied on as a curative measure will disappoint.

In cases of hemicrania, neuralgia and dysmenorrhea, phenacetine is absolutely to be depended upon. We must, however, look for the cause of the pain, and only by removing that with appropriate remedies can we hope to keep the patient free from a recurrence of the symptom. Where the headache depends upon kidney disease of malaria or syphilis, etc., it is obvious that a radical cure cannot be brought about with this remedy alone, to the exclusion of medicine adapted for the removal of the cause. So it is with whooping cough; for a time the paroxysm can be kept in abeyance and modified in intensity, but if we solely rely on it to shorten the disease, we will be much disappointed. In children it seems to be even more efficacious than in adults, and in the irritable symptoms produced by the pains of the teething process it is simply invaluable. The only objectionable symptom which occasionally becomes annoying is the severe sweating it produces in exceptional cases. Usually this can be obviated by reducing the dose, and it will be found that the dose in these cases has been larger than necessary to gain the original object of its use, namely, the numbing of the pain.

For the reduction of high temperature it will be found equally serviceable if we bear in mind that its action is not curative, but gives comfort to the patient, husbands his nervous power, and thus really conduces

to conserve his strength and power of resistance, to withstand the onslaught of a debilitating fever. In the bone pains of la grippe, it has never once failed me, and never produced the slightest depressing symptoms in the doses advocated and in its combination with caffeine. Where the effect of these moderate doses was not as pronounced as desired, it was usually found that the true specific for the disease was the proper remedy to give. I never think of giving phenacetine in cases where my diagnosis shows the cause to be malaria, syphilis or kidney disease; for these affections we have remedies that are pretty nearly positive to eliminate the poison from the system, and these then are the true specifics and will give satisfactory results. If the profession will only bear in mind, that there is not a single therapeutic agent that is a cure-all we will have better results from our medication, and if when a drug does not give the expected results we would review our diagnosis and try to find if we were not at fault in giving a drug where the indications were for something else, we should not so often find medical men declaring their absolute unbelief in the efficacy of any therapeutic measure.

It seems to me that if phenacetine be given alone, except with a stimulant as caffeine or aromatic spirits of ammonia, we are better able to control and watch its effects on painful diseases. The specific for the disease should be given independently and at the proper intervals, while phenacetine should be administered as needed for the relief of pain, not giving the patient directions to take it every three or four hours as a method of routine, but leaving to his judgment whether it should be repeated every four hours or six hours, according to the relief given.

Besides its analgesic qualities, phenacetine has a tendency to produce sleep, at least soothing and quieting the nervous system in such a manner that sleep often follows the administration of the drug. I have never noticed it to produce sequelæ as morphia does in some people, making them restless and excited, losing control over themselves and so bitterly complaining of the after-effects that in some cases they would rather suffer the pain than the nervousness and unrest following the sleep induced by morphine.

In cases of severe gall-stone or renal colic phenacetine should not be thought of; its power is not great enough to make any impression on the excruciating agony of these complaints—morphine or chloroform are the only satisfactory agents upon which the physician can rely with any surety of giving relief. Also in the pains of peritonitis and incarcerated hernia phenacetine is powerless to assuage the agony. In labor pains it is often a godsend, acting with more certainty and with greater celerity than chloral; in fact in all pains due to spasm it is indicated, and very seldom does it leave one in the lurch.

The influence of phenacetine in blunting the nerves of sensation can also be taken advantage of in some functional troubles of the genito-urinary system. In many cases of nocturnal incontinence in children a dose of this drug given at bed time will act like a charm, and this troublesome symptom, if due to a hypersensitive condition of the neck of the bladder, will be relieved to the great delight of the mother, who often has lost all faith in medication for this condition.

By thus discriminating in the use of remedies we do not often grope around in the dark, being compelled to use one remedy after another in an uncertain state of mind whether we will attain our object or not but can feel reasonably sure that our patient will derive the fullest relief in the shortest time that medical skill can afford him. G. C. H. Meier, M.D., New York.

Sodium Bicarbonate in Dyspepsia.—The author first discusses the divergent views obtaining among eminent practitioners concerning the action of sodium bicarbonate, some (Trousseau) prescribing the salt before meals, with hydrochloric acid after meals, while others (as Dujardin-Beaumetz) advise the use of sodium bicarbonate on an empty stomach, to excite stomachal digestion; and Linossin and Lemoine have concluded, after analyzing successive specimens of gastric contents, that sodium bicarbonate is always an excitant of hydrochloric acid secretion. In the test made by the last-named authors, the stimulant effect attained its maximum when the salt was given one hour before meals; it was weak with doses of 1 gramme, and attained its highest degree with doses of 5 grammes.

Dr. Mathieu's own experience shows similar results: Doses of ½ to 1 gramme had no apparent action on gastric digestion; with 3 grammes given an hour before meals, a marked excitation of peristalsis was observed; with 5 grammes there was excitation both of peristalis and of hydrochloric secretion.

We must also take into account the physiological condition of the stomach in different individuals; the same dose given at the same hour does not produce the same effect in all. A smaller dose is required in subacidity, a large one in cases of hyperacidity. In the latter, no sodium bicarbonate should be given before meals, as this would increase the hypersecretion of acid.

The ingestion of a small dose (½ to 2 grammes) of the bicarbonate at the beginning of meals is frequently beneficial, provided that peristalsis and glandular secretion are sufficiently preserved and capable of responding to stimulus. We should, therefore, not give small alkaline doses in great dilatations with considerable stasis and hypochlorhydria. If given in large doses at the end of digestion, sodium bicarbonate neutralizes the acidity of the gastric juice and completely arrests digestion. This proceeding is indicated in hyperchlorhydria and in round ulcer. In cases of hyperacidity, the author usually gives the alkalines in the course of digestion, a little before the pain (due to hyperacidity) is felt, and in rather large doses, to prevent this pain. He thus arrests the gastric digestion of the albuminoids in the moment when it might become painful, thus permit-

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ting the patient to be benefited by the preceding peptonization.

In cases of subacidity, with slight organic hyperacidity, it often suffices to give very small doses of bicarbonate toward the end of digestion, to calm the pain by saturating the acid, and, perhaps, also by stimulating peristalsis.

It results from the totality of recent researches, that sodium bicarbonate has not only an immediate influence upon digestion, but tends, after having been taken properly for a certain time, to modify the secretion and peristalsis. The time of ingestion is, then, no longer important.—Dr. A. Mathieu in *Bull. Med.; Amer. Med. Surg. Bull.*

Typhoid Septicemia and Pseudo-Typhoid Infections.—Cases occur which in their course and chief symptoms closely resemble typhoid, but which on minute pathological examination show an absence not only of the ordinary typhoid characteristics, but also of any other signs which could lead to a certain diagnosis as to the nature of the affection. Banti (*Rif. Med.*) describes some cases of this nature, of which the following notes will give the chief characteristics.

The first case was exposed to typhoid infection, and shortly afterward she became ill with headache, loss of appetite, and afterward, fever. She had the typical typhoid facies, with dry tongue, slight delirium, subsultus tendinum, etc., but all through the course of the affection there was a complete absence of diarrhea, cutaneous rash, meteorism, and enlargement of the spleen. The case terminated fatally after the third week. The post-mortem examination showed a complete absence of enlarged follicles in the intestines, a single minute ulcer in the end of the duodenum, a small spleen, a normal liver and mesenteric glands. The kidneys were slightly enlarged, and showed cloudy swelling of their epithelium. The blood and juices of the organs yielded typical cultures of the typhoid bacillus. The reason for the absence of the usual pathological signs of typhoid in the above case is difficult to find, but the author suggests that, perhaps, the body became infected through the small ulcer found in the jejunum, giving the infection a septicemic character, and preventing the usual lesion of the intestinal lymphatic apparatus.

The cases of pseudo-typhoid described in the same paper all occurred in one household, the members of which were affected one after the other with an affection clinically almost impossible to distinguish from true typhoid. The only symptom failing was the usual petechial rash. One case ended fatally, and on examination showed a complete absence of bacilli from the blood or exudations. The spleen was much enlarged, also the intestinal solitary glands. Typical typhoid ulceration was wanting, but there was an extensive intense enteritis.

This group of cases would be extremely difficult, if not impossible, during life to differentiate from cases of true typhoid, unless one insists on the presence of a rash as a sign of this disease; yet the pathological examination excluded the possibility of considering them as such. The author prefers to group them under the heading "pseudo-typhoid."—*Brit. Med. Jour.*

Ether and Albuminuria.—The *Nouveau Montpelier Medical* contains a review of an article on this subject, by Dr. Barensfeld, which was published in the *Munch. Med. Woch.* The writer remarks that, if etherization has still determined opponents, it is because the careful study of this method of anesthesia has often been somewhat neglected, and because, on account of some real inconvenience of the method, too much stress has been laid upon observations of little value.

Certain American surgeons have maintained that ether exercises an unfavorable action on the kidneys, but Barensfeld's researches go to show that this opinion is not very well founded. In order to determine the alleged relation of cause and effect between etherization and albuminuria, Barensfeld analyzed the urine of some persons who had been operated on, before and 24 hours after the operation. Out of 150 cases albumin was found after the operation in 4 only, in 2 of which the patients had showed signs of albuminuria before the operation; moreover, in these 2 cases the quantity of albumin had not increased under the influence of the ether. With regard to the 2 cases where albumin did not manifest itself until after the operation, 1 of the patients had been subjected to laparotomy for intestinal occlusion, after having been for three days in a condition of extreme prostration, and died on the day of the operation. The other had been operated on for inguinal hernia by Kocher's method, and after the operation considerable albuminuria appeared and persisted, although gradually diminishing, for four days. It was on the whole, says the writer, the only case out of the 150 of true nephritis due to the etherization.

The author reports, among others, a very interesting case of nephrectomy for left nyphrydrosis in a child of three years, who had borne the ether very well. There had been no vomiting, and after the operation not even a trace of albumin had been found in the urine.—N. Y. *Med. Jour.*

Acute Arsenical Poisoning, with Subsequent Multiple Neuritis.—At a recent meeting of the New York Neurological Society, Dr. Philip Meirowitz presented the case of a young may, aged 19 years, who had inadvertently swallowed a large dose of arsenious acid, a teaspoonful (about 70 grains by weight). Immediately perceiving his mistake, he had forced himself to vomit by thrusting his finger into the pharynx, but the vomiting had not been very copious. Three hours after the ingestion of the poison severe pains in the stomach had come on, accompanied by vomiting, and this had continued for three days at intervals of from 5 to 10 minutes. Food could not be retained, and he had come to feel an intense thirst. A physician who had been called had prescribed iron; but

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this had not been retained. The pain in the stomach had lasted for six days; the pulse had grown weak, the urine had been bloody, and its passage had caused considerable pain. The bowels had remained costive for 4 days. On the second day after the poisoning the patient's sight had become affected. On account of the weak action of the heart attempts to sit up in bed would result in syncope. There had also been temporary deafness and tinnitus aurium, with hemorrhage from the ears, followed by a discharge of pus. On the fourth night after the poisoning the patient had become delirious and had hallucinations of sight; this had lasted for two days. The tongue had been blistered and swollen; the lips, eyes, and face edematous. With the exception of a few pimples on the face, there had been no skin eruption. He had had a severe, burning headache, which had been difficult to relieve. On the seventh night he had entered into a condition of collapse, but had rallied the next morning. On the ninth day the stomach had tolerated a little food, and on the eleventh day he had been able to leave his bed. He had lost about twenty pounds during his confinement. At the end of the third week severe, continuous pains had manifested themselves in the legs, and three days later in the feet, which had become swollen. He had never had never had any pains in the arms, but some tingling in the hands. The condition of his legs had gradually become worse, until he had been unable to walk without the aid of crutches. On October 15, 1894, when he first came under Dr. Meirowits' observation, an examination was made with the following result:

The patient's gait was that of an ataxic; the legs were lifted high, to enable the toes to clear the ground, and were brought down with a stamp. The feet drooped and were cyanosed and cold; there was marked tenderness to pressure of the feet, legs and thighs; the muscles of the legs were atrophied; there were involuntary contractions and twitchings in the calf-muscles. The foot, patella, and cremasteric reflexes were absent. Control over the contents of the bladder and bowels was normal. There was anesthesia of the feet to the touch, extending to a point immediately above the ankle joint; two inches above this there was an area of hyperesthesia. Both lower extremities showed pretty generally hyperesthesia to pain. On testing with hot and cold water, the feet were found to be markedly anesthetic, while the lower half of each leg was hyperesthetic. There was also decided anesthesia of the legs to both faradaism and galvanism. The electrical tests showed the reaction of degeneration for both currents. In the upper extremities the hands were mainly affected, the movements of the fingers were greatly impaired.

The Cerebral Centers of Vision and the Intracerebral Visual Nervous Apparatus.—Vialet (*Rev. gen. d'ophthal.*) believes that the hemianopsia which complicates verbal blindness is due to a destruction of the deep intracerebral visual fibers. The most circumscribed cortical lesions capable of producing hemianopsia or cortical blindness, according as they are unilateral or bilateral, are situated on the internal surface of the occipital lobe and radiate into the region of the calcarean fissure. The cortical center of vision occupies the entire extent of the internal surface; it is limited anteriorly by the internal perpendicular fissure, above by the upper border of the hemisphere, downward by the lower of the third occipital convolution, and posteriorly by the occipital pole. The fibers, after having traversed the parietal and occipital lobes, end at the lower portion of the external corpus geniculatum and pulvinar, and at the external surface of the latter, by rising as far as the middle third of the optic lamina. The cortical center of vision is not completely isolated, for numerous associated fibers connect it with the visual center of the opposite hemisphere, with the center of visual memory, and with the zone of speech. The fibers which unite the two visual centers of the hemispheres with each other are represented by the callous fibers which pass by the pad or cushion of the corpus callosum. Those which connect the visual center of perception with the center of visual memory follow many paths; the most easily differentiated fasciculi are the transverse fasciculus of the cuneus and the transverse fasciculus of the lingual lobule. Those which connect the cortical visual center with the zone of speech are formed by the lower longitudinal fasciculus, and especially by the occipito-temporal portion of this fasciculus.—N. Y. *Med. Jour.*

Blinding of the Retina by Direct Sunlight.—Mackay (*Ophth. Rev.*) believes that the first retinal function which is modified by a sunlight injury to the human eye is the capacity for observing after-images at the affected part. The whole phenomenon seldom lasts more than a few minutes, and its disappearance is followed by a prompt recovery of the normal retinal function. The persistence or reappearance, on closure of the eye, of a sun-image which does not rapidly undergo alterations in color may perhaps be taken as the mark of a retinal stimulation which has slightly surpassed the physiological limit, but at the same time it is an indication of cellular vitality at the injured part. It is an unfortunate characteristic of this affection that the injured eye is usually that one which had previously the acuter vision. The state of the color sense at the injured part has not received much attention. The scotoma is positive and has generally been projected as a gray spot or luminous disc. The defect for colors extends over a larger area and is more profound than for white. The revolving movement and the oscillation complained of by some patients are curious accompaniments of the scotoma for which no satisfactory explanation has yet been given. The symptom is usually very persistent, and constitutes a factor to be reckoned with in framing a prognosis. As regards the ophthalmoscopic picture, if the case be seen within the first week, and the lesion be slight and limited to the fovea, only a little flattening and loss of the light reflex is likely to

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be found. During the second week there is a tendency toward increase of pigmentation from proliferation of hexagonal epithelium, and this may replace or obscure the signs of exudation.

The prognosis for a decided improvement in vision and a practical cessation of discomfort is, on the whole, favorable, but complete recovery is exceptional. The data to be considered in forming our prognosis are as follows:

1. The time which has elapsed since the accident.
2. The degree of impairment of visual acuteness for test types and colors.
3. The extent of the scotoma, and especially of the absolute area contained within it.
4. The gravity of the ophthalmoscopic changes.
5. The presence or absence of oscillating movement.
6. Metamorphopsia.
7. The local and general healthiness of the patient.
8. The refraction of the eye.
9. The natural pigmentation of the fundus.

As regards the treatment, the protection of the eyes from great alterations of light by the constant use of dark glasses with side pieces (London smoke, No. 3), and rest from eye work during the first month, is all that is indicated.—N. Y. *Med. Jour.*

Difference in the Actions of Pepsin and Pancreatin in Digestion.—Extensive experience has proved to the author that pepsin is indicated only in a very small number of cases of indigestion. If there be an insufficiency of ptyalin in the saliva, starchy substances will reach the stomach without being digested; pepsin will have no effect on it, whilst pancreatin—which digests twenty-five times its weight of starch—completely saccharifies it.

In stomachal digestion, pepsin can be active, but it is absolutely indispensable that it be in the presence of an acid gastric juice, which, in the author's opinion, occurs very rarely. If the pepsin be replaced by pancreatin, giving a dose of ½ to 1 gramme before meals, the latter, by virtue of its power of peptonizing thirty-five times its weight of albumin, will secure rapid and complete digestion of the albuminoids in the meals.

The action of pancreatin on facts can not be doubted, since the pancreatic juice which contains it possesses the property of emulsifying and decomposing them. But it is necessary, to maintain its emulsifying power, that it pass the stomach without being acted upon by the gastric juice; it must, therefore, be protected against the acid of this juice.

The author states that in patients who had taken pills containing iodides with pancreatin immediately after their meals, the urine and saliva began to give an iodine reaction only six hours after the ingestion of the pills. Pancreatin contains three ferments: Amylopsin, which saccharifies starch; trypsin, which peptonizes albumin; and steapsin, which emulsifies and decomposes all fatty substances. Pancreatin, therefore, acts on all food by the simultaneous action of its three constituents, and thus secures complete digestion. Moreover, it is indicated in enterocolitis; and in gouty persons, it is said to improve nutrition by modifying the products of digestion, and to cause cessation of attacks of gout and of glycosuria.—Dr. Gombault in *Gaz. des Hop.; Am. Med. Surg. Bull.*

SURGERY.

Castration for Prostatic Hypertrophy.—It is not two years since J. William White communicated to the American Surgical Association the results of his experiments for inducing atrophy of the prostate in dogs by removing their testicles, and pointed to the marked and speedy diminution of the prostate thus uniformly induced as suggesting the probability that in hypertrophied prostates of men an equally marked shrinking would follow the same procedure.

Search in literature had enabled him to marshal in addition a very limited number of observations in comparative anatomy, recorded by Hunter, Owen and Griffiths, that lent additional weight to his own investigations. To these could be added certain observations upon the atrophied condition of the prostate in eunuchs and one case where the growth of the external genitals had been arrested in boyhood. This was the sum total of recorded knowledge of the influence exerted upon the prostate gland by the testicles that at the time of the publication of White's memoir was in the possession of the medical profession.

The effects of the removal of the ovaries upon the uterus and upon uterine myofibromata were well known generally, and it is doubtless the fact that the similarity in structure between these uterine growths and the prostatic growths awakened in the mind of White the idea that it might be possible to affect the latter through the testicles as favorably as the former were affected through the ovaries and that prompted him to his experiments. The final suggestion of the therapeutic application of castration for the relief of prostatic hypertrophy, with which his memoir was concluded, was, evidently not a haphazard idea, but was a logical deduction from an adequate and well considered series of already established facts. The novelty of the proposition made its proposer show proper cautiou in recommending it to the attention of the profession, even after he had worked it out, and he forestalled unfavorable criticism by stating that he himself had not then formed definite and final convictions on the subject but advanced the suggestion for the purpose of provoking discussion and trial.

It is quite evident that the Philadelphia surgeon, previous to the inauguration of his personal experiments early in 1893, had knowledge only of the facts that were the common property of surgeons generally. Possibly the existence of a relation between the testicles

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and the prostate gland, similar to that known to exist between the ovaries and the uterus, had independently occurred to the minds of some surgeons before the publication of White's memoir. Mansell-Moullin has since stated, in his little book on "Enlargement of the Prostate," that in November, 1892, he had discussed with a patient the advisability of trying such an operation, but that the patient declined to have the experiment made upon himself. Even this date was six months after the beginning of White's investigation of the subject, and at any rate Mr. Moullin seems to have himself regarded the proposition as a passing caprice, and to have dismissed it from serious consideration, for, notwithstanding the large number of cases of prostatic overgrowth that are continually demanding surgical relief for the most urgent suffering, he does not claim to have considered the subject again until after the publication of White's memoir, nearly a year later, since which time he has unreservedly advocated the operation.

Perhaps no surgeon ever received a greater compliment from another than Mr. Moullin has given Dr. White in the opening sentence of the chapter (XI) in the book referred to, p. 154, which is as follows:

"Removal of the testes is followed in a large proportion of cases, if not in all, by complete and rapid absorption of the enlarged prostate. This has now been proved conclusively. The gland entirely disappears; nothing is left but a little fibrous mass."

It is true that in the later paragraphs of this chapter the author does not specifically state that White had first demonstrated this fact by an elaborate series of experiments upon the lower animals undertaken for the express purpose of determining whether or not such an influence could be exerted upon the prostate by removal of the testicles, and whether, if so, it was sufficiently certain to justify the adoption of the procedure as a therapeutic resource in the prostatic overgrowths of men. It is to be presumed that Mr. Moullin did not think it necessary to restate in so many words what he knew that all the surgical world already knew. An implied compliment is always greater then a badly stated one, and, although it would have been a much more graceful thing for the London surgeon to have fully and specifically stated the real character of the work that had been done by his Philadelphia colleague, it was not necessary, for its omission could not detract from the well earned credit which is universally ascribed to the latter for his masterly work. An undue sensitiveness has been displayed by some of the American medical journals as to the way in which Mr. Moullin has chosen to speak of Professor White's work, as if in some way the credit of the latter had been assailed, and an important question as to priority had been raised. There is certainly no ground for any of this feeling.

As to actual priority of performance, three months after the publication of Dr. White's memoir a Norwegian surgeon, Ramm, of Christiania, published (September, 1893) the statement that in April of that year, before the reading of Dr. White's paper, he had removed the testicles from an old man as an experiment for the purpose of producing atrophy of an enlarged prostate.

In some English and American journals there has been of late quite a number of communications upon various phases of this subject. Not the least interesting is the statement by Harrison, of London, that years ago a patient had requested of him that he would remove his testicles in the hope that it might benefit his prostatic disease! This the surgeon refused to do, and contented himself with subcutaneously dividing the vasa deferentia of his patient, and then "thought nothing further of it" until the fact was recalled by reading White's paper. Here, as far as information goes up to date, would seem to be the real father of the operation. For this man not only conceived the idea, but offered his own body for the performance of the experiment. It is to be regretted that Mr. Harrison did not take advantage of the offer, for, with the light of after events, it is quite apparent that he missed a great opportunity.

These questions of priority of mental conception, of suggestion, or even of actual performance are of little importance. As far as the surgical world is concerned, the fact is undeniable that the general serious consideration of the possible value of the removal of the testicles as a therapeutic measure in the treatment of prostatic hypertrophy dates from June 1, 1893, when J. William White read his paper upon "The Present Position of the Surgery of the Hypertrophied Prostate" before the American Surgical Association. Without this work of White, the subsequently-published cases of Ramm would have attracted but little attraction; the operations of Haynes and of many other surgeons which have since been reported would not have been made, and Chapter XI of Mansell-Moullin's book on "Enlargement of the Prostate" would never have been written—L. S. Pilcher in *Annals of Surgery*.

Five Gunshot Wounds of the Intestine and Mesentery; Laparotomy; Sutures; Recovery.—By Dr. William H. Carmalt (New Haven). The patient was a lad of between twelve and thirteen years of age, who had accidentally shot himself, at 11 A.M., with a 22-calibre revolver, held in immediate proximity to the abdomen. When seen there was no pain in his abdomen, and the only soreness he would acknowledge was directly at the point of entrance of the bullet, which was about half an inch to the left of and a little above the umbilicus. The wound was about a quarter of an inch, with discolored edges, and his trousers and shirt (the only garments he wore) had perforations in them corresponding to the situation of the wound.

The wound was explored, and found to go nearly perpendicularly to, but slightly downward and outward and evidently entirely through, the abdominal wall. An incision was carried along the track of the wound, and continued to and then along the median line. No blood appeared in the cavity, and at first no evidences of injury to the contained organs, but on drawing the intes-

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tines out, protecting them at the same time by keeping them wrapped in moist, warm, aseptic towels, and passing them gently and rapidly through the fingers, in search of an injury, a double perforation in the upper part of the small intestine was revealed. These perforations were evidently the points of entrance and exit respectively of the bullet, and were separated by about half an inch of sound tissue. These were sewed up as one wound, using very fine silk, by the Lembert suture. Continuing the search, two other very similar wounds were found in the large intestine, which were treated in the same way, and later a single perforation of the mesentery directly at its junction with the intestine. In all five separate wounds were found. No escape of the contents of the intestine had occurred, and, as mentioned, there was no hemorrhage; but the bullet and two small pieces of cloth were found. In the latter the patterns of the shirt and trousers were to be recognized. The intestines were then replaced, the abdomen thoroughly flushed out with warm boiled water, and the external wound closed with silkworm-gut sutures.

He had eaten nothing that morning. He had drunk some milk about an hour before the accident, and was waiting for his dinner. This accounted for the empty condition of his stomach and bowels, and the absence of fecal extravasation through the intestinal wounds.

The recovery from the anesthetic was followed by nausea, lasting for several days, but there was no complication that could be referred to the abdominal wounds. On the sixth day there was an elevation of temperature reaching to about 102° F. The bowels moved in the course of the first week. Later he had two severe attacks of intestinal colic, owing to indiscretions in diet, but these passed off happily, and five months after the operation he is as well as he ever was, doing all the work and play incident to his surroundings and age.—*Yale Med. Journal; Annals of Surgery.*

Case of Recovery From Perforating Typhoid Ulcer after Abdominal Section and Drainage.—By Dr. Robert Abbe (New York). The patient, a woman, twenty-one years of age, at the end of three weeks of typhoid fever, convalescence having begun, developed symptoms of perforation of the bowel. For two days she was treated by poultices and opium, when Dr. Abbe saw her. Her abdomen was then greatly distended; pulse, 140; temperature, 104° F.; lower part of hypogastrium dull. A median incision below the navel exposed distended coils of deeply-congested and greatly-inflamed intestine, smeared with sticky lymph. The pelvis and lower abdomen were filled with a collection of foul, purulent, and fetid intestinal extravasation, feebly confined by matted coils of intestines, loosely glued together, that broke apart on being touched, but which, being recognized, enabled dim to introduce clean sponges under the upper abdominal wall. Two pints of foul purulent fluid and thick lymph were cleaned out, and the abdomen irrigated with warm sublimate solution, 1 to 20,000, followed by plain warm-water irrigation. On the lower part of the ileum were then seen many thick oval patches, in one of which was a gangrenous perforation, a quarter of an inch in diameter, from which intestinal contents were seen to pump out. This was closed by interrupted silk sutures, over which two layers of mattress stitches were placed. A large abdominal tamponade of iodoform gauze was placed within the abdomen and pelvis, and no attempt made to close the wound. An enema of hot, black coffee and whiskey was given, and the patient put back to bed three quarters of an hour from the beginning of etherization. At the end of forty-eight hours she was in good condition, except for tympanites. The tampon was changed, and five grains of calomel given. A little fluid feces leaked from the wound after the calomel action; this continued for two weeks, when it ceased. The abdominal wound closed in rapidly by granulations, forming, finally, a narrow and firm scar. The convalescence was rapid.—*Medical Record.*

NOTES AND ITEMS

The Charter of the New York Hospital was granted by George III in 1771.

The Kentucky State Medical Society will hold its fortieth annual meeting in Harrodsburg, on June 12, 13 and 14, 1895.

The Medical Schools of Paris have an attendance of 5,144 students; 4,142 are native; 1,002 foreign; 196 are women, only twenty-six of whom are French.

The International Congress of Gynecology and Obstetrics will convene at Geneva, Switzerland, in September, 1896, instead of 1895 as previously stated.

The Medical Association of Georgia will hold its forty-sixth annual meeting in Savannah, on April 17, 18 and 19, 1895. The President of the Association is Dr W. T. Westmoreland, and the Secretary Dr. D. H. Howell, both of Atlanta.

Anti-Vivisectors and Plastic Surgery.—The Story runs that Dr. W. W. Keen, of Philadelphia, wishing to transplant the nerve of a dog into the leg of a man, sent to the city pound for a dog. He there learned that the pound was controlled by the Society to Prevent Cruelty to Animals, the President of which, Mrs. Caroline Earle White, is opposed to vivisection. When Mrs. White learned what the Professor wanted she refused to permit him to have a dog, despite the fact that the life of a human being depended upon it. In her letter to the Professor, Mrs. White said: "In answer to your note I will say that, although I should always

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approve of sacrificing a dog's life in order to save that of a man, unless the latter was a curse to the world and the former a boon and blessing (which is sometimes the case), I think that I am justified in refusing to give you one of the dogs at our pound for an experiment which may prove of benefit to one of your patients or may not, the latter being the most likely alternative. It thus seems that the lady knows a great deal about plastic surgery and the relative value of human and canine life. —*Medical Record.*

Yellow Fever Martyrs.—Dr. H. R. Stout, of Jacksonville, Fla., asks to correct a statement recently made in a New York journal, to the effect that a certain physician of the former place was the only one who remained during the yellow fever epidemic of 1888. Dr. Stout says: "All the physicians of the city, with one exception, remained here, and not only that, but most of us had the disease, and four of our number laid down their lives serving their fellow men."

The American Climatological Association will hold its next meeting at Hot Springs, Va., June 13, 14 and 15, 1895. This time was chosen to accommodate members of the Laryngological Association, which meets in Rochester the beginning of the following week. Members desiring to read papers on this occasion will please send the titles as soon as possible to the President, Dr. S. E. Solly, Colorado Springs, or to the Secretary, J. B. Walker, 1617 Green Street, Philadelphia.

Action of Iron on the Organism.—Rosendahl (*Eira*) has often observed that subcutaneous injections of iron salts in frogs causes gastro enteritis (*Jour. Amer. Med. Ass'n.*). The results of his experiments seem to show that the iron salts of the pharmacopeia are not assimilated by the alimentary canal of man or mammals if this tube is in a normal condition. After their administration by the mouth they can not serve as material for the elaboration of hemoglobin, nor directly influence it. For the treatment of chlorosis homol, homogallol or ferratin are much superior to the preparations of iron in use at present. These new remedies may be destined to replace the latter, for the principal object of treatment of chlorosis is to increase the strength of the blood in hemoglobin.

Dangers of Chloroform Narcosis in Diabetic Patients.—Baixter calls attention (*Centrlbl. f. Chirg.*) to the dangers of chloroform in diabetic patients, basing his remarks on three cases of his own and other cases in the literature. On recovering from the narcosis the patients may feel all right but in twenty-four to forty-eight hours they experience a sense of inquietude, then of hebetude, which passes into coma, in which state they very often succumb. Nothing characteristic is discovered at the necropsy. The author has been able to find acetone and acetic acid in the intestines, even in non-diabetic patients. As chloroform in diabetic patients—perhaps by some yet unknown change in metabolism—may give rise to dangerous secondary symptoms ending in coma and death, the author thinks the existence of diabetes is an absolute contra indication to chloroform narcosis.—*J. A. M. A.*

The Trials of a Collectionist.—In our time we have been an ardent munismatist and can fully appreciate the annoyance caused to a collectionist by having visitors continually questioning the anthenticity of the articles composing the collection. A Frenchman once possessed a mania for collecting pieces of ropes that had served at executions. No hanging took place but that an agent would secure some strands or a piece of the rope that had done the duty. He was imposed upon more than once into purchasing innocent pieces of rope as being from the identical one, and at celebrated hangings. Some friends so annoyed him by proving the unreliability of some of his ropes and by casting doubts upon the others, saying that they knew full well that these had never hung a man, that in despair he made a single rope out of the whole lot with which he hung himself, leaving a note to the effect that it should not be said that he had possessed a single strand of rope in his collection that had not hung a man. —*Nat. Pop. Rev.*

Liability of Railways for Surgeon's Malpractice.—A comparatively new question which the courts are having to settle is that with regard to the extent to which a railway company that maintains a "medical department" is liable for the negligence of its physicians and surgeons. In a recent case where this question was raised, it did not appear that the company was under any obligation by contract to furnish surgical and hospital accommodations for its injured employes, and so far as was shown, its doing so was wholly voluntary. Nor were its employes under any obligation to avail themselves of the facilities for treatment offered, and paid nothing for them when accepted. That the company maintained its medical department for its own advantage and not for charitable purposes only, the Supreme Court of Iowa holds (Eighmy v. Union Pacific R'y Co., decided January 28, 1895, 61 N. W. Rep. 1056) might be presumed, but that did not alter what appeared to be the fact, that it was not maintained to discharge any statutory or contractual obligations. Its duty, under the circumstances, was to select a reasonably competent man for surgeon, and it was liable only for a neglect of that duty and not for any negligence or malpractice of the latter. And in performing such duty, it was bound only to the exercise of reasonable care and diligence.—*Jour. Amer. Med. Ass'n.*

The Chemical Pathology of Uremia.—In a recent experimental study of uremia, Hughes and Carter have contributed to the pathology of this important condition (*Amer. Jour. of the Med. Sciences*). They

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conclude that there is one poison, present alike in uremic human blood, in dropsical effusions in uremia, and in dog's blood in experimental uremia; and that this poison is not one of the ordinarily recognized constituents of the urine, as generally believed, but one whose nature or even existence has not before been recognized. The fact that its action is much lessened after subjection to moderate heat, and that it is not readily dialyzable, seem to indicate that the poison is an albuminous body; while chemical evidence indicates that it is not a constant constituent of the blood, but produces the uremic condition by accumulation, owing to the inability of the kidney to excrete it, or more rarely by a sudden and enormous production. The order in which serums stand as to their toxicity, proceeding from the most toxic to the least, is, man's, the dog's the horse's. This suggests to the writer that the origin of the substances is to be traced to the character of the food, which is more nearly carnivorous with man and the dog and purely herbivorous with the horse, and that its production takes place somewhere in the digestive tract.

The New York State Board of Medical Examiners.—The State Board of Medical Examiners, representing the Medical Society of the State of New York, has made a report of its work for the year 1894, which contains a number of interesting data. The total number of candidates actually examined was 536. Of these, 470 were examined by the Board representing the Medical Society of the State of New York; 59 by the Board representing the Homeopathic State Medical Society; and 7 by the Board representing the Eclectic Medical Society of the State of New York. Of the first, 316 passed, and 32.7 per cent were rejected. Of the second, 46 passed, and 22 per cent were rejected. Of the third, 3 passed, and 57.1 per cent were rejected. Seventeen candidates were rejected a second time; 6, three or more times; and 54 were unable to secure a license.

It appeared that, whereas prior to 1891 the number of physicians locating in the State of New York was from 700 to 800, there are at present less than 400. The fact, however, that there were 536 applicants is accounted for not only by an increase in the number of medical men, but principally by the fact that the State license has become a matter of such importance that most of the States having boards of medical examiners accept them as licenses to practice, without exacting added medical tests. Under the provisions of the law the Board of Medical Examiners is permitted to indorse as sufficient to practise the licenses issued by other State boards of medical examiners, provided the standards of these boards are not lower than those of the New York Board. Numerous applications from various States were received for this indorsement, but on investigation it was found in each instance that the standard was not sufficiently high to warrant approval of the documents submitted. The Board complains that the preliminary education of medical students and candidates for the licensing degree in the State of New York is not satisfactory. It finds that while the standard is far above that established in other States, it is still insufficient and not on a par with the requirements exacted from students of other professions in the State. In accordance with this opinion the Board adopted a resolution, declaring that the best interests of the public and of the medical profession would be materially advanced by gradually increasing the minimum requirements as to general preliminary education, until no candidate be entitled to matriculate in 1897 at a degree-granting medical school who shall not have completed at least a full high school course. The public may well congratulate itself upon the outcome of the agitation directed to its welfare and interest, instituted and carried to a successful issue by the medical profession.—*Medical Record.*

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ORIGINAL ARTICLES

Pelvic Abscess.

BY W. O. HENRY, M D.,

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Read before the Omaha Medical Society.

MR. PRESIDENT AND GENTLEMEN—Owing to the confusion upon this subject in the minds of many as shown by various discussions had in this body during the past year or two, I thought it would be interesting and no doubt profitable to go somewhat fully into the subject of pelvic inflammations in the female and ascertain if clear-cut and well-defined distinctions cannot and should not be made differentiating cases that are now badly confounded.

It will be well in the first place to consider briefly the anatomy of the female pelvic cavity and find what organs it contains and their respective relations, together with the tissues around and supporting these viscera.

An imaginary plane passing through to the promontory of the sacrum and top of the symphysis pubis with another passing through the tip of the coccyx and lower part of the symphysis will form respectively the upper and lower boundaries of the pelvic cavity proper with its surrounding bony and fibrous walls.

The organs in this cavity naming them from before backwards in order are the bladder and urethra, uterus with its appendages and upper part of the vagina and rectum. Besides arteries, veins, lymphatics, nerves and cellular tissue surrounding some of these organs there is the peritoneal covering which drops down from the abdominal cavity to cover parts of the bladder, uterus with its appendages, rectum and upper posterior part of the vagina where Douglas' pouch is formed.

Let it be remembered that as the peritoneum passes down from the anterior abdominal wall to enter the pelvic cavity and spread out upon the front of the bladder, it does not adhere closely to the bony wall nor begin to ascend upon the distended bladder nor the neck, but rather from one and a half to two inches above this point; thus leaving quite a little space here filled with fat and connective tissue. The peritoneum then passes over the body of the bladder and down its posterior surface to a point nearly corresponding with that on the anterior surface, thence it is reflected to the uterus, being separated from the neck of that organ as high as the internal os by a considerable layer of loose connective tissue. Folds of the peritoneum at either side of the cervix containing cellular tissue pass from the uterus to the bladder, forming vesico uterine ligaments. From a point on the anterior uterine surface opposite the internal os the peritoneum is firmly adherent to the body and fundus over which it passes to the posterior uterine surface opposite the internal os when it is again separated from the cervix by connective tissue. The peritoneum now drops down over the upper and posterior part of the vagina, forming Douglas' cul-de-sac by being reflected upon the rectum, and passing up over the sigmoid flexure, then out into the abdominal cavity upon the colon. Let it be noted that the peritoneum forms a fold at either side of the cervix passing to the rectum called the recto-uterine ligaments. These ligaments are formed each of two layers of peritoneum separated by connective tissue precisely as the vesico-uterine ligaments are formed in front.

Please observe, too, that as the peritoneum covers the body and fundus of the uterus so closely, it passes off to either side, enclosing considerable connective tissue between its anterior and posterior layers as it goes out to the lateral walls of the pelvic cavity to form the broad ligaments and cover the Fallopian tubes, ovaries and sound ligament, to all of which it is so intimately adherent as to form a distinct coat.

In this connective tissue of the broad ligaments ramify the uterine and ovarian bloodvessels which have a very free anastomosis. Here also may be found the lymphatics in great abundance having direct connection with the lumbar and inguinal glands. It is important to remember that the Fallopian tubes open directly into the peritoneal cavity. So that fluids, septic or otherwise, which pass out of the fimbriated extremity of the tube fall into it.

Let me now remark that any tissue found in the pelvic cavity which is capable of taking on inflammatory and suppurative processes if found elsewhere in the body, may be exactly the same thing here.

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In the second place then, What is a pelvic abscess? But here we must first inquire, What is an abscess? An abscess is a circumscribed collection of pus resulting from a localized inflammation.

Then a pelvic abscess is a circumscribed collection of pus resulting from localized inflammation in the pelvic cavity. Of course this is rather a broad definition and will therefore include pyo salpinx, abscess of the ovary, abscess of the peritoneal pelvic pouches, phlegmon of the broad ligaments, ischio-rectal abscess, pelvic cellulitis resulting in suppuration from whatever cause and wherever located. But since all of these except two are well known by other names which designate them accurately, it is desirable that we have two terms as correctly defining them as the others do the conditions to which they are applied. Then pelvic abscess would be a general term correctly applied to all of these con ditions each one of which would have its own peculiar designation and there would not be the confusion there now is when writers attempt to make it mean only those abscesses which occur in the pouches of the peritoneum, in the pelvis and in the peri-uterine cellular tissue.

I will suggest for the former pelvi-peritoneal abscess, designating the exact location in front, behind or at either side of the uterus as the case may be.

For the second an old term used by some but almost obsolete yet every expressive, phlegmon; and so by prefixing the term peri-uterine to it and adding to the right or left, in front or behind the uterus as the case may be, will accurately define this second condition and by uniformly using these terms we would add to the simplicity of the subject. It is not many years since it was believed by the profession generally that most cases of suppuration in the pelvic cavity in connection with female troubles were due to inflammation of the cellular tissue in the broad ligaments and that immediately surrounding the cervix. Upon careful investigation and post-mortem examination however the Fallopian tubes were often found to be widely dilated and filled with pus. From this point it was easy to affirm that all cases were of this nature or of the type of suppuration in the pouches of the peritoneum so that there was extensive adhesive inflammations shutting off the pus from the general peritoneal cavity and thus abscesses were formed behind, at the sides and in front of the uterus. Hence it has come to pass that there are some who take this extreme view, denying *in toto* the existence in any case of abscess or inflammation in the cellular tissue which is found in the broad ligaments or around the cervix. But a calm and deliberate view of all the facts will convince the unbiased practitioner that a middle ground is at once the most rational, scientific and truthful.

Maury says: "Abundant autopsical evidence can now be adduced to prove that two distinct forms of peri uterine inflammation may exist, each entirely independent of and separate from the other. To these inflammations have been given the names, according to the tissues involved, of pelvic peritonitis and pelvic cellulitis." He says again: "Some writers allege that cellulitis never exists alone, but is always associated with more or less pelvic peritonitis. There is sufficient evidence to show that this opinion is incorrect."

Coe says: "I have rarely (perhaps half a dozen times) found such thickening in the cadaver which could be referred to a pure and straight-forward cellulitis or inflammation of the connective tissue."

Emmet has met with two cases of cellulitis in children aged respectively eight and ten years, while his records contain histories of fifteen cases after the menopause.

Aran reported the case of a woman eighteen years of age whom he examined and in whom he found a swelling on the side of the uterus encroaching on the lateral wall of the vagina which after death was found to consist of indurated cellular tissue

Byford says: "The most frequent locality of pelvic abscess is between the layers of the broad ligament."

Pozzi says: "Alex J. C. Skene includes, as do many others, under the name of pelvic cellulitis, what I call pelvic abscess and diffuse pelvic cellulitis." This author treats of phlegmon of the broad ligament which is only another name for abscess of the broad ligament following cellulitis.

Terrier and Hartman are quoted in the *American Journal of the Medical Sciences* of July 1893, summarizing the results of their observations in fifty nine cases, as follows: "Celiotomy is preferable to vaginal hysterectomy in the treatment of such cases (pelvic suppuration) because it is often possible to save one tube and ovary—a fact which, together with the lessened risk, outweighs the mere object of avoiding an abdominal cicatrix. The latter operation, however, should not be entirely rejected, since it is applicable to rare cases of bilateral suppuration in the peri-uterine cellular tissue."

Cramer reports the case of a girl twelve years old, who develeped a parametritis resulting in abscess and discharging through the rectum from fecal impaction.

Thomas and Munde say: "This disease, which is now known to be of frequent occurrence, consists in an inflammation of the adipose and areolar tissue lying behind, in front of and at the sides of the uterus, and extending up between the layers of serous membrane which make the broad ligaments." They say further: "It has become fashionable of late for many of our most enthusiastic and progressive laparotomists to deny utterly the existence of such a pathological condition as pelvic cellulitis except in a few rare instances after parturition, and to assume that all cases of inflammatory exudations in the pelvis, with or without suppuration, are unquestionably intra-peritoneal, that is to say, that all cases of pelvic inflammation proceed primarily from the Fallopian tubes, and involve secondarily the ovary and adjacent peritoneum."

Pelvic abscess as such exists in the minds of these gentlemen only as a synonym for abscess of the Fallopian tube (pyo-salpinx), ovary or pelvic peritoneum, any one of which may, by adhesion and perforation, force its way into the pelvic cellular tissue, and thus

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simulate an abscess resulting from pelvic cellulitis. * * * In our opinion, inflammation of the pelvic cellular tissue, with its resultant consequences of dislocation of the uterus, pelvic abscess and cicatricial induration, occurs independently by itself, as well as inflammation of the Fallopian tube, ovary or adjacent peritoneum, with resultant purulent accumulations in these organs. It is true a purulent deposit outside of the peritoneum may perforate into that cavity, and the reverse, probably more frequently the latter; and both may exist together at the same time in one and the same individual, or a pyo salpinx may rupture between the layers of the broad ligament. But that is no reason why they do not frequently occur separately and independently. Pelvic peritonitis and pelvic cellulitis are in fact independent and entirely unassociated diseases.

I have quoted thus largely, gentlemen, to show you the teachings of some of the very best observers in this country and in Europe. If necessary much more of a like nature could be added. In fact so abundant was the testimony along this line that I hardly know just where to stop in my quotations.

In regard to the origin of these pelvic cellular inflammations, Emmet says: "I am deeply impressed with the belief that future observations will establish the fact that the point of origin of inflammations in the pelvic cellular tissue is in the veins."

Pozzi says: "It is indisputable that large lymphatic vessels run along their sides (that is of the broad ligaments) and may serve as a path for the inflammatory process."

Thomas and Munde give as causes, parturition or abortion, inflammation of the uterus or ovaries, direct injury from coitus, caustics, pessaries, operations or blows. Now if you will observe precisely the same causes will produce pelvic peritonitis. This latter is also excited by gonorrhea, escape of fluids into the pelvic peritoneum. It may be just as well for us to recognize the fact too that clinically these different forms of pelvic abscess cannot always be differentiated, however well marked they may be pathologically.

But it is very evident that they never will be separated at the bedside until they are carefully looked for with the knowledge that these pathological differences actually exist.

But some one may ask why differentiate them, since the cases are generally subjects for laparotomy in any event; and they can be dealt with as the operator may think best, after the abdominal section has been made?

This is the important point. If it can be clearly determined that the pus cavity is one which cannot be enucleated by celiotomy, then it had probably better not be made, and particularly is this true if the cavity of the abscess can be thoroughly drained per vaginam. In other words if the pus cavity be limited to one of the peritoneal pouches it would be better to open it through the vagina. And this statement is equally true if not more imperative when the collection of pus is limited to the cellular tissue in the broad ligament or surrounding the cervix. I doubt not but it would be better even to evacuate a pus tube or abscess of the ovary per vaginam if it were known before the operation that enucleation could not be effected. Permit me now to mention two cases in which I was not able to make a differential diagnosis and did an operation with favorable results in both cases.

Mrs. C., aged 45 years, had been sick and confined to her bed most of the time for several months under care of two or three different physicians when I was called to see her and found her with fever, pain in lower abdomen, tympanitis, bowels much constipated, great tenderness in iliac regions and over ovaries, with hardness and apparent tumor or tumors filling the pelvic cavity. Vagina hot, roof firm, hard and tender upon pressure with uterus firmly fixed and immovable.

Upon consultation with my friend Dr. Coulter, we decided that a laparotomy was at least advisable, but did not promise any definite results. The patient readily gave her consent and after due preparation the operation was done, when an immense pus sac was found on the left side filling the entire broad ligament and dipping down alongside of the vagina.

Enucleation was out of the question and the sac was emptied with its margin stitched to the abdominal walls and drained after having been thoroughly washed out with antiseptic solution. The patient made an uninterrupted recovery from the operation. The sac appeared to close properly and the patient seemed to be all right, but after a few weeks the sinus opened down to the very bottom of the sac and discharged from the abdominal opening for some time. I washed out the cavity but it finally broke per vaginam and under persistent injections thrown through the abdominal wound which passed out through the vaginal opening it was finally perfectly cured. All of this time the woman was up and around enjoying very good health. Some months after upon careful examination the uterus was found to be movable, in normal position and the parts in good condition.

The second case is that of Mrs. S, who had likewise been an invalid for some months with symptoms more or less like those of the previous case. There was, however, no apparent tumor in the pelvic cavity, nor was the uterus immovable, neither was the vaginal roof hard like in the former case. There was, however, an acute retroflexion and great bladder trouble.

She had apparently uterine colic quite often She complained greatly of tenderness upon pressure in the median line from the umbilicus down to the pubic bone. She frequently spoke of a drawing pain in this region as if the muscles here in front were too short. I advised an abdominal section to find out what the trouble was and if possible remove it. After due preparation an incision was made in the median line and a pelvic abscess was found which had begun in the cellular tissue around the cervix and extending around the bladder had separated the peritoneum from the abdominal walls

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as high up as the umbilicus in the median line and for one or two inches upon either side of it.

This large suppurating cavity was cleansed and an opening made into the vagina through which was passed a drainage tube, the abdominal wound sewed up and the patient made a prompt recovery.

Death From Hysteria.—Report of a Case.

BY L. C. ALLEN, M D., HOSCHTON, GA.

For the last four years I have been using apomorphine hypodermically to cut short hysterical convulsions. It had always acted like a charm for me in these cases. I usually gave one-tenth of a grain to an adult. I have never found any other remedy so prompt, so reliable and so effectual in these troublesome cases. Not only does it stop the convulsions promptly and completely, but some cases in which I used it have not as yet had any return of the attacks.

The case I have to report now, however, did not terminate so fortunately. The patient was a healtyh young lady, aged 17, well grown for one of her age. From getting her feet wet she contracted quinsy, which ran a severe course, one of the tonsils suppurating. Before the quinsy got well, symptoms of continued fever set in; it proved to be typhoid. The fever lasted seven weeks, and was a very severe attack, indeed. After convalescence was established she improved rapidly, gaining flesh and strength very fast. At the end of one month, counting from the time the fever ended, she was able to go visiting, and seemed to be almost herself again. At this time, however, she began to complain of headache; it was not very severe, but was almost continual, with paroxysmal exacerbations. This continued without treatment for eight or ten days, when, growing worse, I was called. On the day I was called, she had three or four slight, and one pretty severe, hysterical (?) convulsions. After a convulsion would wear off, she would remain in a somnolent condition for a period varying from three or four to thirty-six hours, when she would begin to complain of her head again, becoming very restless, tossing about in bed and lamenting. This condition would grow worse and worse until a convulsion would come on. During the period of somnolence she could be aroused eaisly, would answer questions rationally, and take water and food. The temperature was normal; the pulse good. No pain anywhere except in head. Diagnosis—hysteria.

We put her on potassium bromide, ten grains, and chloral hydrate, five grains, in water every four hours. Also gave her valerian, and blistered both temples (pain was in the temporal regions). She improved some; had no more convulsions for ten days, but remained somnolent most of the time, and had paroxysms of headache every day. On the thirteenth day, counting from the day on which she first had convulsions, she commenced having slight convulsions again, and her mind became wandering and her ideas incoherent. Each convulsion now got harder than the last, until she had one more formidable than any she had had before at all. As it was lasting quite a while, I decided to try the virtues of apomorphine. I injected into the arm one fifteenth of a grain of apomorphine muriate (P. D. & Co.'s). Soon after giving it, I noticed that her respiration was markedly increased in force and rapidity, so much so indeed that the *alae nasi* were completely collapsed at each inspiration, and the sound produced by the ingress of air was usually loud remarkable—quite like the sound a dog makes just before it vomits. The medicine did not produce emesis; the patient heaved a time or two but did not vomit. This peculiar breathing continued for about ten minutes when it gradually became normal. My attention was called aside at this instant for two or three minutes. When I returned to the patient I was surprised to see that her hands and face had turned livid. Respiration had ceased. Ether was injected hypodermically into the precordial region and artificial respiration attempted, but to no avail. She never breathed again. *The heart continued to beat firmly and regularly for several minutes after respiration had ceased*, it then became slower and slower until it stopped.

What caused this death? My idea at the time was, that the apomorphine had, after exciting, produced paralysis (exhaustion) of the respiratory center; that this effect had been made possible by the enervated condition of her vital power, which condition had been brought about by the previous spell of fever; or, that the unfortunate result was due to an idiosyncrasy. On more mature consideration, however, I have come to the conclusion that death was due to asphyxia produced by spasm of the glottis, and that the patient might have been saved, probably, by a resort to tracheotomy. The following extract, taken from Prof. Rosenthal's "Clinical Treatise on Diseases of the Nervous System," vol. ii, p. 38, is interesting, read in connection with this case:

"The *spasmodic contraction of the laryngeal muscles* (italics his) appears, in the lighter form, as *hysterical laughter*, which may last a quarter of an hour at a time, and is sometimes followed or interrupted by *convulsive weeping*. At a more advanced stage, *convulsive cries* make their appearance, under the form of barking, howling and sneering. At other times the sounds simulate the cries of different animals, and may exercise a contagious effect upon predisposed subjects, so that epidemics of hysterical cries may be produced. *Spasm of the glottis* occurs in rare cases from the reflex effect of hyperesthesia of the laryngeal mucous membrane, from irritation of the recurrent nerve. Guisan and Dubois mention cases in which death from asphyxia occurred, and Bell and Briquet report others in which the danger was only averted by resort to tracheotomy. To this category also belong *hysterical asthma*, (perhaps from spasm of the bronchial muscles) and *hysterical cough* (irritation of the superior laryngeal nerve). Hysterical *yawning* results from spasmodic movements of

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inspiration, and is accompanied by other spasmodic phenomena."

Hip Disease in Children.

BY DR SAMUEL E MILLIKEN, NEW YORK,

Surgeon-in-Chief, New York Infirmary for Cripp'ed Children.

[Abstract of paper read before the Tri-State Medical Society, April 2-4, 1895.]

The clinical features of hip disease in children, are varied, but the three cases spoken of, although representing different stages, in that none of them have had sbscess.

HIP SPLINT.—The protection (extension) hip splint was employed. While it is impossible to produce complete immobilization with this splint, the movements of the hip joint are materially lessened. While this splint has the mechanism of the so called extension apparatus, the greatest benefit obtained from it is that of protection. As yet we have no walking splint by which a uniform or constant amount of extension can be maintained.

The late Mr. H. O. Thomas, of England, has long ago demonstrated that with perfect immobilization and protection of the joint from concussion, very good results could be obtained. The greatest objection to his splint was that the patient had to walk on crutches. During the treatment of hip disease careful measurements should be taken at least once a month. Where great muscular spasm exists, the patient should be kept recumbent with the joint perfectly immobilized. Should that fail to relieve the reflex symptoms, Buck's extension should also be applied. By this means the deformity can oftentimes be materially lessened and thus be in better condition for wearing the protection splint It is occasionally necessary to administer an anesthetic for the purpose of correcting the muscular spasm, after which the plaster of Paris hip spica should be applied and the joint kept for ten days or two weeks before the hip splint is applied.

COMPLICATIONS.—Aside from the deformity which is produced by muscular spasm, we must not forget that ankylosis may be true or false as is the case with other joints. If bony, a subtrochanteric osteotomy will be required; while if only fibrous or tendinous, the contracted structures can be divided.

ABSCESS.—Unless the abscess is so large that the mechanical treatment is interfered with, it should not be operated upon; however, should it develop rapidly, rather than allow otherwise healthy structures to become involved, a free incision should be made and the cavity drained, thus to avoid a series of disagreeable sinuses which often follow the old method of allowing hip abscesses to evacuate voluntarily. Aspiration of these abscesses rarely proves effective and often increases the suppurative process by the entrance of the external air.

EXCISION.—I am happy to say, the advocates of excision of the hip joint in children, are growing less each year, as experience has shown that conservative methods offer more favorable results, and the dangers of frail joints and retarded development are too well known to call for any further comment.

Attention to the general health during the treatment of tubercular joints is of the greatest importance. Those engaged in special work are at times, no doubt, guilty of paying too little attention to the patient as a whole, and direct all their attention to the one particular lesion for which they were consulted. The digestion in the children is usually weak and we should not expect large doses of cod liver oil to be assimilated at first, but should be administered in small doses and gradually increased.

The involvement of other joints and pulmonary tuberculosis can be best prevented by keeping the general health in the best possible condition. Fresh air and a long sojourn in the country during the summer months works wonders with these anemic subjects.

The Incubation of Erysipelas.—H. Roger (*Le Presse Med*) after remarking that so called idiopathic erysipelas can not serve to solve the problem of the incubation period, gives a table of 41 cases occurring secondary to traumatism. Five cases presented an incubation of from 7 to 18 hours, 5 of 24 hours, 9 of 1 to 2 days, 8 of 2 to 3 days. His conclusion is that an incubation of a few hours only is much more common than is generally stated in standard works. At the same time the fact that the incubation period may extend to three weeks is undoubted. These prolonged periods of latency Roger would explain by supposing that the streptococci gain an entrance at the time of traumatism either from the wounding agent or integuments, and that a passing depressant influence, such, as exposure to cold or a draught, lowers the resistance of the organism and enables the streptococci to become pathogenic. As to the incubation being as short as 7 or 8 hours, several very striking instances were observed by him. Experimental inoculation of cultures on a rabbit's ear gave also short periods, usually 24 to 48 hours; in 2 cases, however, it reached 11 days. Roger observed no relation between the duration of incubation and the severity of the erysipelas. One patient only out of the 41 died; in his case incubation lasted 8 days. In 2 other severe cases the incubation was in one 12 hours, in the other 8 days. The duration of incubation may be very short, from two very different conditions; in the first case from the virulence of the microbe and the rapidity of its development, and in the second because the organism is gifted with a high reactional power. Here the bactericidal serum and phagocytes arrive early, and triumph more easily over the microbes which have already developed. The duration of incubation and gravity of infection were in no way influenced by sex or age, by the general condition, or by previous diseases.—*Brit. Med. Jour.*

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EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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The Intelligent Public and the Quacks.

Everybody knows what is meant or implied by "intelligent" jury. The "intelligent" public enjoys about the same notoriety as a shining example of the "*lucus a non lucendo*," when it comes to illustrate the relations between the quack and the best known people of the nation. Quackery, it must be confessed, seems to be as indispensible to humanity as superstition. No amount of education, and no degree of enlightenment will permanently drive out either quackery or superstition. But there is a limit somewhere. If quackery or superstition exceed this limit, the domain of the ludicrous begins. Generally speaking it is the ludicrous that kills; but in the matter of quackery and superstition no killing takes place physically, intellectually, socially or otherwise, neither on the part of the perpetrating fraud nor on the part of the victim.

Such a victim, possessing extraordinary resisting power and phenomenal vitality is the the Hon. Chauncey M. Depew, of New York, the successful railway manager and irrepressible champion post prandial orator of the United States. His name figures prominently in a quack advertisement which for *naivete* and assertiveness deserves the blue ribbon. Chauncey claims to have been cured by an anti-rheumatic ring of his rheumatism and recommends it to the similarly suffering multitude. This anti-rheumatic ring is sold at the price of $2.00 a piece; actual cost about one cent. No doubt, Mr. Depew is a great man and has by his conversational and oratorial powers risen to a prominent position in the eyes of his countrymen. But in medical matters he seems, like many of his kind, sadly defective. That an intelligent man like him should be an advocate and a promoter of outspoken and puerile quackery is a sad commentary on the inadequate distribution of mental faculties in one and the same individual.

The Reporters Are Ousted.

After continued and untiring admonitions on the part of the REVIEW, the St. Louis Medical Society has at last seen fit to exclude the reporters of the public press from its meetings. This action is a wise one and, if adhered to permanently, will have the effect of encouraging the chronic stay aways, the workers, the quiet and unobtrusive element, in other words, the ethical members of the Society to attend the meetings again and take part in the scientific programme. We are highly pleased to be in a position to state that the President of the Society, Dr. Mooney, has completely fulfilled the expectations of this journal, with regard to his energetic support of the ethical majority as far as the reporter question is concerned. The idea of hiring a man to keep out reporters from entering the hall of the Society was first suggested by the REVIEW and we are proud to state that its untiring warnings have been heeded at last.

A Timely Warning.

Influenza is again raging in this section of the country and this is an opportune time for physicians to draw the attention of their patrons to the dangerous custom of taking all kinds of so-called "headache powders" and other analgesic and antipyretic drugs recommended in pamphlets and newspapers, unless they are administered under the supervision of a physician. The recklessness with which particularly this class of drugs of known and unknown compositions, are taken by the intelligent and unintelligent laity, is to some extent due to the readiness with which physicians allow their signatures to be affixed to all kinds of recommendations of proprietary medicines. Men, who in the eyes of the public and of some physicians even, rank high in the medical profession, frequently recommend such remedies in printed pamphlets, etc., and thoughtless druggists dispense them without hesitation or even knowledge of the dangers to which they expose some of their patrons and friends. We are aware that under the existing circumstances druggists can hardly absolutely refuse the sale of popular drugs whose great curative powers are extolled in the daily press. The only remedy appears to be proper legislation.

The disastrous results that may follow the administration of antipyretic and analgesic drugs, such as antipyrine, antifebrin, etc., including the many patented

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secret nostrums, whose main ingredients these drugs constitute, have taught physicians to exercise great care and discrimination in prescribing such drugs, and our brothers and colleagues of the other faculty, the druggists, can not be too earnestly cautioned against the recommendation and use of these drugs without medical supervision.

In our opinion, the principal blame for this dangerous custom must be laid at the door of the daily press, which publishes the details of the symptoms of a disease, their treatment, etc. Drugs that may cause alarming symptoms and sometimes death, as the class of remedies referred to, should be labelled "*poison*" by the druggist who sells them and the Legislatures should pass a law to that effect, in order to protect the public against disastrous results and a possible attack of disease that might be brought on by a momentary lowering of the vitality of an individual in consequence of taking an overdose of a depressant drug or secret nostrum; for there cannot be any doubt that not unfrequently the indiscriminate taking of such drugs does produce a sufficient depression to cause a *tempus minoris resistentiæ* against all kinds of infectious diseases, to say nothing of the fatal results that may follow their administration in valvular disease of the heart, angina pectoris, pulmonary and kidney diseases.

A similar condition of things seems to exist in England, for under the heading, "Amateur Therapeutics in Influenza," the *British Medical Journal* of March 9, 1895, expresses its views upon this subject and, as we consider the same of much interest and importance to the medical profession as well as the public in general we reproduce them as follows:

"Among the dangers of modern life is certainly to be reckoned the fatal readiness with which people follow the advice of irresponsible persons in matters affecting health. Wise people, full of self-confidence, laugh at the silly performances of the victims of hypnotic suggestion; but let the suggestion come in the form of a printed paragraph, and straightway many of the wisest succumb before it. How else are we to explain the reckless manner in which in all sorts of conditions men dose themselves with dangerous drugs, recommended by the know not whoms as specific for this, that, or the other malady which happens to be talked of at the moment? Just now it is "influenza" which is the excuse for people half, or more than half, poisoning themselves with drugs, before using which a physician, primed with knowledge, would ponder greatly. What are we to think of people who imagine that they are suffering, or who really are suffering, from influenza, a disease which is trying to all and dangerous to many, pouring into their unfortunate bodies such drugs as antipyrine, phenacetine, and such-like compounds, and so lessening the chances of their recovery. If the craze for amateur therapeutics led people to the tisans and herb teas of our grandmothers we would say nothing; they formed part of a bed and coddling treatment which was good. But the modern craze for self-physicking with strong drugs, and for takig them in doses such as physicians would tremble to prescribe, is utterly and absolutely bad. Not only are the doses often dangerously large—in one case brought to our notice a patient with a dilated, weak, flabby heart was taking on her own responsibility the colossal dose of 30 grains of antipyrin every three or four hours—but they are generally taken in the hope of 'throwing off' the disease. It cannot be too strongly impressed upon people that a perfectly innocent influenza may become fatal by virtue of the attempt to struggle against it and throw it off, and that when the blood is disorganized by doses of antipyrine, and when the pain which ought to have driven the patient to bed is by the same means kept in check, exposure and exertion are even more dangerous. We feel very strongly that the daily newspapers would be doing a great service to their readers if they would eschew the discussion of details as to symptoms, dangers, and specifics; the timorous are so terrified that they become ready victims to the disorder, while the bolder spirits dose themselves inordinately, and thus run risks which are absolutely needless and the gravity of which they little know."

Meeting of the Tri-State Medical Society.

Last week St. Louis had the honor of welcoming the members of the Tri-State Medical Society, which convened at the Planters Hotel. The object of the meeting consisted in the reading of papers and their discussion and the holding of clinics at some of the hospitals. The meetings were very enjoyable and well attended. The papers were as usual exceedingly interesting and the operations done at the hospitals very instructive and highly successful. The next meeting of the Society will be held at Des Moines, Iowa.

CORRESPONDENCE

Somnial Onanism.

Editor MEDICAL REVIEW.—Occasionally, through the columns of the MEDICAL REVIEW, I notice with much interest the report of very peculiar cases; and the one which, with your permission, I am going to report, is rather out of the usual line, and is similar to nothing which I have ever read of. It has been very interesting to me, as well as the cause of much study and though.

The patient is a very healthy and well-nourished lad now in his eighteenth year. Two and a half years ago he was affected by an attack of acute mania, during which attack he was a typical lunatic, entirely devoid of reason. And what was still more strange he called for food and ate quite regularly, and could only be sub-

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dued by enormous doses of sleep-producing drugs; this has been followed by many since.

The treatment in this case was to deplete the patient, by which means he was tided over this condition, and convalescence was by crisis; he was deathly sick, and on the following day he would be entirely well.

The patient went from my care, and was during such period under treatment by one of the most expert neurologists on this coast—I refer to W. S. Whitwell. He, however, finally fell into my hands, and during the intervals between the attacks, which were very irregular, I used every means to discover the cause of his trouble. He is a very chaste young man, and very fond of the company of ladies. He is not in the least bashful, nor does he enjoy or take part in profane stories so common with youths of his age.

Certain conditions convinced me that onanism was the cause of his trouble after I had by careful observation and nearly two years of treatment excluded all other causes, chief among which was the stains upon his nightshirts, which were produced by dried secretions from the penis. So the nurse was directed to blister the organ thoroughly; with the blister came gradual convalescence during the four or five days that his penis was sore, and when that organ began to get well again, he began to get worse; so after giving him an enormous dose to cause sleep, I watched him and just when he was sleeping perhaps five or ten minutes I turned down the covers and caught him playing with a partially sore, thoroughly erected organ, which I at once re-blistered and so obtained a complete recovery. When he was again perfectly well I told him of the treatment and from his statements to me I am firmly convinced that he masturbates during his sleep and is as wholly unconscious of the act as one who walks in his sleep.

He has had no attack since he has worn a spiral wire shield at night, and he tells me that when the organ gets erect in its cage it awakens him.

Soquel, Cal. H. O Brink, M.D.,
Ex Pres. Santa Cruz Co. Med. Soc.

A Novel Vivisection.

Editor Medical Review.—Some time ago I was standing near a railroad track when a rapidly running vestibuled train struck a pig. It was torn to pieces in a twinkling of the eye and its heart thrown to one side, with all its vessels severed from it as with a razor. For two or three minutes it continued to "beat," wobbling on the ground. Then the movements became less pronounced, but rythmical contraction took place for fifteen minutes or more. It was the most remarkable thing I ever witnessed. I do not theorize, but I am certain of one thing—the poor hog did not die of heart failure as so many do in these degenerate days.

R. O. Huffaker, A.B., M.D.
Chuckey City, Tenn.

ABSTRACTS

MEDICINE.

The Present Conception of Hysteria.—P. J. Mobius (*Monatssch. f. Geb. und Gyn*) gives credit to the French school, and notably to Charcot and his pupils, for our knowledge of hysteria. The phenomena of this affection are usually divided into the attacks and the permanent symptoms, or "stigmata." Particularly marked in the latter is the hysterical anesthesia and its psychical nature. The hysterical anesthesia and the concentric contraction of the field of vision differ from that caused by organic disease. The patients so afflicted do not stumble and knock up against things as they would if an organic lesion were the cause of the symptoms. Succinctly stated, the anesthetic patient feels but does not know it. A few clear examples illustrating the author's meaning are stated. The hysterical stigmata are similar to the anesthesia. For instance, the paralysis following emotional excitement does not possess the characters due to an organic lesion. The paralysis consists in an inability to use the muscles purposively, though the power is retained. A patient suffering from hysterical paraplegia can move the limbs vigorously in bed but is unable to stand or walk. To this form of paralysis belongs the so-called "astasie-abasie." The hysterical phenomena stand in close relationship to the phenomena produced by hypnotic suggestion. Here also the starting point is the imagination, whether the suggestion comes from within or without, that is from the person himself or some one else. Here also the symptoms even vanish as suddenly through the imagination as they have been evoked by it.

Experience teaches us that in the majority of cases the hysterical are abnormal from birth, that they belong to the hereditary degenerative class. Hysterical mothers have hysterical daughters. In other cases some other form of degeneration may be traced in the parents. The hereditary origin of hysteria, its close connection with other forms of degeneration, accounts for the fact that often connected with hysteria can be found other symptoms of degeneration—for instance, a tendency to steal, mendacity, cruelty, sexual immorality, etc.

The author does not believe in acquired hysteria, although in some cases no hereditary taint can be found, and the person may reach a ripe age without showing signs of the affection. In these cases it deals usually with a traumatic hysteria. But the traumatism is merely the exciting cause. The predisposition must exist, and consists in a certain degree of degeneration. The degeneration, however, may be acquired through the infectious diseases (typhoid fever, abuse of alcohol, long continued excitement). According to this concep-

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tion, diseases of the female generative organs may be the exciting causes. The attendant pain, and other disturbances, fever, and the loss of secretions may weaken the organism, and with it the brain. But often the *modus operandi* is different. In woman, much more than in man, the sexual life forms the center point of existence. Hence every disease of the sexual organs disturbs in a high degree her nervous system. To this must be added the suggestion coming from relatives, friends, and particularly from the physician. Finally the local affection causes the woman to be hysterical, not directly, but through care and anxiety. But much oftener the local affection, be it an endometritis or something else, has no connection whatever with the existing hysteria, and it is only the attendant physician who finds the relationship. The assumption that hysterical phenomena follow no laws is false; they do follow laws (psychological), but different from that of other diseases. It is senseless also to say that hysteria is limited to the female sex. Marie even went so far as to say that it was more frequent among males than among females. But he gathered his material from the lowest classes in Paris, among whom drunkards, vagabonds and erratic persons are found in large numbers. Still, so far, it is true that hysteria in the male is not uncommon, and that the disproportion between the two sexes is not so great as is commonly supposed. Worthy of notice is the relationship of hysteria to age. Boys and girls are often afflicted with hysteria, the female sex being in preponderance here also, but less so than in adult life. The hysteria of childhood is so far benign that the disease often vanishes rapidly of itself. On the other hand, it must not be forgotten that the earlier the hysteria appears, the greater must be the inheritance, and the greater the caution to be exercised in giving a prognosis. The blossoming period of life is also the blossoming period of hysteria. It is at this period particularly that one finds the classical hysteria of the female with its treasure of symptoms and their rapid interchange.

In the treatment of hysteria two things must be differentiated:

1. To remove everything which may favor the disease, to strengthen the organism when it is weakened, to regulate the mode of life, and to combat abuses.

2. To attack the symptoms directly a priori and a posteriori—that is, in accordance with our conception of hysteria; and in accordance with our experience only moral influences can come into play. That which is evoked by suggestion is removable by suggestion.

In addition to the suggestion used in the hypnotic and awake state, we have at our command the masked form—that is, the application of a remedial agent which apparently acts in a physical manner, but virtually plays on the imagination. To this class, together with medicaments, baths, electricity, etc., belong gynecological treatment, in so far that one does not expect from it a local effect, but a relief of the hysterical symptoms. On the one hand, gynecological treatment has undoubtedly a powerful suggestive effect; but on the other hand, more than any other form of treatment, it is a double-edged sword, in so far that not only a favorable, but equally as well, an injurious suggestion may be evoked by it; and it is not always in the power of the physician to check the one and nurture the other. Hence it is a good rule to formulate, that "a gynecological examination or treatment should not be instituted unless there be a bona fide local indication." Every thoughtful gynecologist now condemns the shameful abuse to which castration and other operative interference have been carried in the absence of any local indication.—*Amer. Gyn. and Obst. Jour.*

Some Points in the Modern Treatment of Typhoid Fever.—By Dr. Frederick C. Shattuck, (*Boston Med. and Surg. Jour.*). The tedious convalescence, the constant danger of death from exhaustion, the constant local lesion, the intestinal ulceration, etc., are factors to be remembered because of the more or less contradictory therapeutics.

As regards diet, there is a conflict between the treatment of the patient and that of his intestine. The better nutrition is maintained the more rapid the convalescence; but the intestine has ulcers which may perforate the walls or its vessels. Have not the local lesions of late years dominated too much our dietetic treatment? The intestinal lesion is constant, but of its extent we know nothing. Peristalsis cannot be arrested for weeks in order to rest the inflamed part. Pyrexia is considered an indication for lowered diet. Is not this carried too far? Ought not the diet be considered rather with reference to the digestive power? Typhoid patients are seen with tongues clean or nearly so, and of nearly or completely unimpaired digestive powers. Hence, there is no reason why typhoid patients should not have articles of easy digestion which leave such residue as not to excite undue peristalsis, or irritate the ulcerated Peyer's patches. The cases must be selected: those with irritable stomachs ("gastric fever" cases) must be treated in one way; those demanding food, in another. Milk leaves an enormous intestinal residue; yet despite the local lesion, it is the popular and favorite food. The author allows his cases raw or boiled eggs, custards, animal broths, strained gruels, ice-cream, junket, blancmange, and even scraped or very finely minced meat, in addition to milk. The stools should be watched for undigested food. Water should be freely given to promote the elimination of soluble poisons.

In the use of intestinal antiseptics, certain facts must not be lost sight of:

1. Decomposition in the intestine is physiological.

2. Its existence depends on organisms, which, to destroy, would be a detriment to either sick or well persons.

3. At present, there are no means of interfering with the activity of the Koch-Eberth bacillus without interfering with the physiological activity of the intestinal microbes.

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4. The bacillus does not limit itself to portions of the intestines which can, even theoretically, be locally acted on.

Intestinal disorder is not as invariable as the books teach, as an analysis of the 233 cases under the author's care will show:

	Per Cent.
Diarrhea a prominent symptom in . .	18½
Diarrhea a transitory symptom in . .	19½
Regular bowels in	14
Constipation, usually relieved by enemata, in	49

There is no evidence to show that an early dose of calomel, followed by intestinal antiseptics, will abort the disease. There is no justification for the routine treatment of typhoid with this class of drugs. Their use should be confined to cases in which there are very offensive movements, meteorism, etc. Naphthaline is not recommended by the author. He prefers the salicylate or subgallate of bismuth. In constipation, water enemata are used every other day.

The fever in itself is not really as dangerous as was formerly believed. Cardiac exhaustion is caused by the absorption of toxines; and in mere reduction of temperature we are not necessarily benefiting our patients. Internal antipyretics are depressants, and therefore dangerous. Brandt supposed his method of cold bathing owed its efficacy to the reduction of temperature, but now he believe that it is really the stimulation of the nerve centers which are depressed by the toxic alkaloids. A temperature of 102 5° calls for a bath with water at 60°. Patients object to this treatment, some very bitterly, but there is no doubt of its value. In many cases alcoholic stimulation is never needed, unless the tub bath is used, when reaction is hastend by small quantities of spirits and water.

Obstinate Hiccough.—Mr. W. Langford Symes, L.R.C.S.I., L.R.C.P.I., contributes to the January number of the *Dublin Journal of Medical Science* an exceedingly interesting article entitled, "A Study of Obstinate Hiccough." Mr. Symes gives the history of a case, and considers the general subject of persistent hiccough as regards its etiology, its pathology, its prognosis, and its treatment. In regard to the pathology of hiccough, he states the current belief to be that it is a reflex spasm of the diaphragm with simultaneous closure of the glottis, the pneumogastric being the afferent nerve concerned, and the phrenic and recurrent laryngeal the efferent nerves. He, however, questions this agency of the phrenic nerve, but thinks the sympathetic connections of the semi-lunar ganglion far more likely to be involved. For this he gives the following reasons:

1. The diaphragm appears to contract before the laryngeal muscles, and this points to a closer and more direct communication with the gastric portion of the vagus than with even the recurrent laryngeal.

2. The course of the phrenic nerve is healthy and its respiratory function perfect.

3. The patient has no control over the spasms, whereas the phrenic nerve is always subservient to the will.

4. Remedies applied to the origin or over the course of the phrenic nerve or to the cervical spine—such as blisters, ice bags, compression, etc.—have no effect, while those directed to the diaphragm, the stomach, and the solar plexus are generally effective.

5. The connection between the pneumogastric and phrenic nerves by means of the third, fourth and fifth cervical nerves is remote, and were this the route taken the impression must travel more than double as fast on the phrenic nerve as it does on the recurrent nerve, since it reaches the diaphragm before the larynx—conditions, the author remarks, which are unphysiological.

6. Romberg's and Bright's experiments show that direct irritation of the phrenic nerve will not produce hiccough.

7. There is a perfect reflex-loop between the stomach and the diaphragm which answers the purpose more directly, separated from the function of respiration and beyond the patient's control.

8. Hiccough is influenced by swallowing and by vomiting to a greater degree than by any respiratory effort.

Some clinical evidence is on record in favor of the agency of the phrenic nerve in the production of hiccough. One piece of this evidence, among others, is the statement of M. Leloir that he has stopped hiccough in a child twelve years old by pressing the finger for three minutes on the phrenic nerve between the two attachments of the sterno-cleido-mastoid muscle, also that he had resorted to this method in a great number of cases, and always with success. How is it possible, asks Mr. Symes, that M. Leloir can so exactly confine the pressure in such a region as the neck? "Can he," he continues, "prove to us that his digital compression did not equally affect the child's pneumogastric, or even the superior and inferior cardiac nerves which are contiguous? We do, not, however, doubt his cures, but the laying of so much stress upon the phrenic nerve in particular in the pathology of these cases seems to us, after a very careful and unprejudiced inquiry into the phenomenon, to be at least an assumption of facts which have not been proved."

Mr. Symes says it is his fervent wish that his article may help to elucidate a most distressing condition, "an awful malady," and rescue it from the domain of quackery and empiricism, and he adds that he will feel that he has not written in vain if it guides others for even a few steps through the darkness and obscurity that still surround the subject in case they engage in similar researches.—*N. Y. Medical Journal.*

The Importance of the Appearance of Jaundice Following the Administration of the Etheral Extract of Filix Mas.—By E. Grawitz (*Berl. Klin. Woch.*). During the last few years there have been reported a considerable number of cases of poisoning by filix mas. The toxic symptoms may

present a picture of cerebro-spinal paralysis; they may be less severe, and in that instance, violent vomiting, abdominal pain, somnolence., etc, are the prominent symptoms, sometimes even temporary amaurosis; but the mildest and at the same time the most frequent form of poisoning presents the milder toxic symptoms, and particularly jaundice.

It has been found that the active principle of the vermicide in question is filicic acid, which is freely soluble in the intestinal canal, but not readily taken up into the system. Poulsson says the official extract (G. P.) is the acid held in solution in a fatty acid.

In the toxic cases thus far reported, jaundice seems to have been noticed in a comparatively small number. It is a significant fact that in the most severe cases, that is, in those which terminate fatally after a short time, jaundice seems to have been absent altogethar.

Although the author has had a large number of patients with tape-worm under his care, he has not had the opportunity of seeing a case of the severe form of poisoning. On the other hand, he has noticed jaundice appear in the majority of the cases treated with filix mas. This is especially true of the cases treated in the latter years.

It has been proved that filicic acid is much more readily absorbed, and therefore more apt to give toxic symptoms, when it is dissolved in ethereal or fatty oils, and since, during the latter years, filix mas was given in conjunction with castor oil, the author regards this circumstance as the cause of the more frequent occurrence of jaundice. The author, however, admits that it is possible that the frequent observation of jaundice may be due to a more careful study of the after-effects of the drug.

Referring to the cause of the jaundice the author tells us that Paltauf regards a catarrhal condition of the duodenal mucous membrane as the cause in only a small number of the cases, and considered an abnormal process of decomposition as the causing factor in the rest of the cases.

The author's own observations led him to believe that in only a small minority of the cases can we regard, with any degree of certainty, a catarrhal condition of the intestinal mucous membrane as the causative agent. In the majority of the cases he could find no reason for supposing an inflammatory condition of the duodenum, but rather looked for the cause in the blood itself.

It was while making systematic examinations of blood that he first noticed the diminution of the red and of the white blood corpuscles, as well as a diminution in quantity of the solid, residual substances of the blood as well as of the serum, after the administration of filix mas.

The greatest change seemed referable to a degeneration of the red blood corpuscles. Similar changes were noticed in nine other cases, and the amount of change seemed greater as the jaundice was more marked. In two cases, however, in which the patients were apparently unaffected by the remedy there were no marked charges in the blood.

The next question to be solved is: Where do the blood corpuscles undergo degeneration? If the change took place in the blood itself, then we should be able to find hemoglobin in the serum; but, such was the case in only one instance, and hence we must look to some other source, and, naturally enough, we look to that organ which is normally the seat of degeneration of the red blood cells, viz., the liver.

And the four cases of cirrhosis cited by the author seem to prove the correctness of this view. These cases proved fatal a short time after the administration of filix mas. The first case was a moderate drinker, the second a syphilitic, the third a combination of these two, and the last a healthy individual, who had, however, undergone three courses of treatment with filix mas

Practically, then, the above observations would lead us to exert great care in administering filix mas to patients with cirrhosis either of alcoholic or specific origin, lest there be caused an exacerbation of the disease, and that, too, with a fatal issue. It also seems advisable not to use the extract in combination with castor oil —*Amer. Medico-Surg. Bulletin.*

The Duration of the Contagiousness of Diphtheria.—The *Journal des Praticiens* for January 19, contains an article in which the writer remarks that this question is the subject of much controversy (*N. Y. Med. Jour.*). A young physician, M. Tezenas, recently collected sixty observations of patients who were attacked with characteristic diphtheria, and he divided these cases into three series, and made a bacteriological examination of the products taken from the bucco pharyngeal mucous membrane and from the nasal discharge. The following results were obtained: In the first series, in forty-four cases, the mucous membrane did not present any false membranes and there was no nasal discharge. On bacteriological examination, the cultures showed no bacilli, except in three or four cases where Loeffler's bacillus disappeared after four days. In the second series, in five cases the mucous membrane was divested of its false membranes and the nasal discharge dried up. Nevertheless, Loeffler's bacillus persisted from twelve to twenty-eight days. In the third series, in eleven cases the nasal discharge persisted, and the cultures with this discharge were positive, although those of the products drawn from the bucco-pharyngeal mucous membrane were negative. The presence of bacilli in the nasal discharge was observed for from five to thirty-five days. These facts, says the writer, lead to the following conclusions:

1. In a number of cases the metadiphtheritic contagiousness ceases with the disappearance of Loeffler's bacillus. Nevertheless, the irritated condition of the bucco-pharyngeal mucous membrane, under the influence of intercurrent measles, favors the increase of the

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bacilli and their presence in the mouth; hence the necessity of a bacteriological examination of the products taken from the mucous membrane of this cavity.

2. Not infrequently (in eleven cases out of sixty) Loeffler's bacillus disappears from the throat, but is still found in the nasal discharge. The trouble is thought to be common coryza, which is a mistake, as this discharge is not accompanied with any symptoms of classic coryza. There is no conjunctival injection, or headache, or watering of the eyes. Ordinarily it is unilateral. The discharge is a transparent mucus and by no means the sanious discharge which succeeds false membranes of the throat.

3. According to M. Tezenas, Loeffler's bacillus exists in the nasal cavities as long as the nasal discharge continues, and disappears when it does. He adds that when this discharge is absent there are no bacilli in the nose.

In practice, then, says the writer, this fact must be taken into consideration, that a nasal discharge the origin of which does not coincide with the disappearance of the false membranes is not diphtheritic. It does not contain Loeffler's bacillus. The bacteriological examination proves that unquestionably.

Pilocarpine in the Treatment of Nephritis.—In the January number of the *Annales des maladies des organes genitourinaires* there is an abstract of a paper which was read at a recent meeting of the Lyons Congres de Medecine interne by M. H. Molliere (*N. Y. Med. Jour.*). The author had tried this remedy in the treatment of acute and chronic nephritis. The applications consisted of frictions, practiced especially on the trunk, with an ointment composed of three ounces of white vaseline and from four-fifths of a grain to a grain and three-fifths of pilocarpine nitrate. A very large dose of the remedy, he says, causes disagreeable cutaneous eruptions, which may make it necessary to interrupt the treatment.

The region is covered with a thick layer of cotton wool and a piece of waxed linen, which is not to be taken off until the wool is completely wet with perspiration, when it is replaced at the end of a few hours. In patients who are subjected to a milk diet, as well as in those who take other forms of nourishment, the results are very nearly the same: a rapid recovery in acute nephritis and a marked amelioration in the chronc form.

M. Molliere calls attention to the sudorific action of pilocarpine, which is manifested by a continued abundant sweat, and a concomitant diuresis is accomplished through the medium of the nervous system. In this way medicaments which act directly on the kidneys after being absorbed by the stomach, which they soon irritate and disorder, may be avoided.

External applications of pilocarpine do not directly influence either the kidneys or the stomach, and the derivative action on the skin facilitates the elimination of the toxines and at the same time relieves the congestion of the kidneys.

Furthermore, the diuretic action of pilocarpine is added to that of the milk, and, by the sweating it provokes, moderates the exaggerated action, if there is any, which may end by irritating the kidney itself. In the beginning of convalescence, says the author, when the edema has disappeared and the albuminuria diminished, it is well to have this indirect diuretic action.

The physiological action of pilocarpine, says M. Molliere, applied by friction, seems to be purely local; the medicament is not absorbed, and it is impossible to find any trace of it in the urine. With regard to diuresis, it may be explained by the effects which are obtained in external applications of certain alkaloids. In the same manner that sparteine, when applied to the skin, produces a lowering of the central temperature, so pilocarpine may give rise to a medullary reflex causing the vaso dilatation of the kidney.

The Blood in Bright's Disease.—Ernst Freund (*Weiner Klin. Rund.*) gives the results of his observations on this subject, extending over three years. These refer to cases of Bright's disease (chronic parenchymatous nephritis, with dropsy), in which the clinical features were well marked, and which were verified by pathological examination. The results were compared with other cases of albuminuria and dropsy, without Bright's disease:

1. Analysis of the blood of 9 cases showed no changes in the absolute quantities of either organic or inorganic constituents. The only alteration was in the relative amounts of the globulins compared with the albumens in the serum. While in normal and other pathological conditions the relation was 1 to 1-1.5, in the 9 cases of Bright's disease it was 1 to 2-3. In 2 cases, in spite of the clinical diagnosis of Bright's disease, the relation of globulins to albumens was 1 to 1.1 and 1 to 11.3; in one of these cases the necropsy showed cystic kidney, in the other contracted granular kidney. This alteration of the relation of globulins to albumens can not be held as specific, because in a case of pernicious anemia it was found to be 1 to 2.

2. As regards the alkalinity of the blood, no specific abnormal condition was found.

3. The conditions of coagulation were found to be altered. While normal serum coagulates uniformly at a temperature of 70° to 74° C. to a firm jelly, in Bright's disease coagulation does not occur till 78° to 82°, and the clot, instead of remaining firm, is easily broken up by shaking. It has been shown that much dilution alters the point of coagulation as well as the condition of the clot, and a dilution of 1.018 generally raises the coagulation point. Normal serum diluted to the same specific gravity as serum from Bright's disease was found to behave in the same way, and similar results were obtained in serum from dropsy without Bright's and in pernicious anemia.

4. Semmola in 1881 showed that serum from Bright's

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disease had a greater power of diffusion than normal serum, or serum from cases of albuminuria without Bright's; Freund's experiments confirm this view, for in 15 cases of Bright's disease the diffusibility with egg albumen was 0.006 to 0.025 g. per cent; in 3 out of 16 control experiments from other diseases the diffusibility was 0 003 to 0.004 per cent, 13 giving negative results.—*Brit. Med. Jour.*

Rare Form of Antipyrin Rash.—In *La Presse Medicale* of February 16, a rare eruption caused by antipyrin is recorded. The patient, aged 30, and very fat, was seized with violent, even unbearable, pains in the head whilst at his doctor's residence, for which 15 grains of antipyrin were given. His urine contained a little sugar (225 grains in the twenty-four hours) and traces of albumen. He also presented an old and obstinate psoriasis in the seborrheic regions (scalp), scrotum, gluteal folds, palms of the hands, umbilicus, etc. Exactly four to five minutes after the ingestion of the remedy he was seized with tinglings over the whole body, then a most intense, intolerable itching with desire to scratch himself. His face became red, his eyes filled with tears, a keen sensation of heat was experienced, his pulse noted 120 to 180 pulsations, at the same time red patches appeared on his neck, then on his back On the morrow, after a sleepless night, there was the same febrile state, the fame pruritus. The eruption at its height consisted of a collection of plaques of a bright inflammatory redness, scattered at all points of the body, without special localizations, without marked symmetry. In general round in shape these plaques were mostly of the size of a 5-franc piece. They formed a slight relief, and in their neighborhood the skin was perceptibly hotter. Taken between the finger and thumb these lesions, in no way painful, gave the sensation of a pretty deep thickening of the skin; their evolution was rapid. On the second day after the febrile state had disappeared, the itching diminished progressively, to disappear on the eighth day. Most of the plaques grew pale, became covered with slight scales, and disappeared in fifteen days. Some of the largest ones presented in their center an epidermic upheaval (abortive bulla), and were a little longer in disappearing. The patient afterwards stated that years before a dose of antipyrin had given him similar trouble. The eruption described differed from a nodose polymorphous erythema in the abruptness of the onset, the tingling and pricking over the whole cutaneous surface, in the itching preceding the eruption and in the eruptive elements being more numerous, less prominent, painless and with rapid evolution —*Brit. Med. Jour.*

The Tubercle Bacillus.—Coppen Jones (*Centralbl. f. Bakt. und Parasitenkunde*) gives a detailed account of the morphology of the tubercle bacillus, and discusses its biological position. In the tissues and secretions the tuberculous organism occurs chiefly in the form of shorter or longer bacilli, which multiply by transverse segmentation; but sometimes in the secretions (sputum), and always in old agar cultivations, filamentous forms appear, which are not segmented, and which also present true branches. By sections of cultures embedded in paraffin, the author has shown that the filiform variety of the tubercle bacillus occurs only on the surface of the culture. In the deeper parts, as in the tissues and in fluids (that is, in situations where the supply of oxygen is prevented), short rods are found. In the bacilli, as well as in the filaments, there are formations which possess many of the physical characters of spores, but which differ in various respects from the typical endospores of bacilli. The author describes peculiar bodies which he has found under certain conditions in the closest proximity to the tubercle bacilli, and which resemble the "clubs" of the actinomycosis fungi. The polymorphism of some of the higher fungi is referred to, and a number of observations are mentioned, which tend to show that bacteria, formerly looked upon as monomorphic, are only stages in the development of more complex forms. The author thinks we ought to hesitate before accepting the common view that the excitor of tuberculosis is a parasitic organism, which is transmissible only from animal to animal, and which is without vegetative existence external to the animal body.—*Brit. Med. Jour.*

Relapse and Diplegia in So called Rheumatic Facial Paralysis.—Hurschmann (*Neurol. Centralbl.*, November 15 and December 1, 1894) states that of 185 cases of peripheral facial palsy treated at the University Policlinic in Leipzig during the last fourteen years, 99 or 73 per cent were reputed to be of a rheumatic nature, 9 per cent were due to aural disease, and 6 per cent to injury (*Brit. Med. Jour.*). These numbers agree closely with the statistical records published by Philip, from Mendel's Clinic. As regards sex, 54 of the 99 were males, 45 were females. Most cases occurred between the ages of 10 and 40; 16 were of severe type, 31 of the middle form and 33 slight. In 19 cases the type was not recorded. The seasonal distribution of the cases shows no excess of severe forms commencing in the colder months. Relapse was noted in 5 cases; in one other case a second attack occurred, involving, however, the opposite nerve to that first affected. The percentage of relapses in Philip's 94 cases was 6.4. Relapse, therefore, is not a common event; its infrequency is against Eulenburg's view that a first attack predisposes to another. Until Minkowski, in 1891, investigated the pathological condition in the case of a man who committed suicide dusing a severe attack of rheumatic facial palsy, no post mortem evidence of the associated morbid changes was available. The condition revealed by Minkowski's case was a pure degenerative neuritis, advancing centralwards from the periphery; the neurilemma, peri- and epi-neurium were quite normal; no trace of inflammatory exudate was present. The author uses the qualification "so called," from the fact that usually all cases of peripheral facial

palsy arising apparently spontaneously in otherwise healthy persons are classed as rheumatic: thus, of the 99 cases so designated in his table, only 34 were attributed to cold. Besides, he is led to the conclusion that so-called rheumatic facial paralysis is probably an infectious disease, which as a rule affects a person once only. The occurrence of a relapse would appear to be explained by failure of the first attack to confer immunity. Cold would seem to play here the same part as in croupous pneumonia. Diplegia is very uncommon, occurring in only one male and one female of the author's cases. He considers that the free anastomosis of the two facial nerves permits extension of disease from one to the other; and he reports a case very fully, in which a slight first unilateral attack was followed six months later by relapse on the same side; during this second attack extension to the opposite nerve took place, the latter nerve recovering before the one first affected.

SURGERY.

Some Thoughts on the Method of Relieving an Obstructed Bowel.—It is the privilege of the President of this Section to address the members at its opening meeting on some matter of surgical interest, and it is an occasion when one may fairly be excused if he elects a topic to which he can apply his experience rather than one of the novel and obscure subjects in which the theorist delights to revel, and which capture the intellect rather than deal with every day incidents of our surgical life.

I do not intend to go far afield for material, because it seems to me that the importance of facts is to be measured by their commonness, and that just as the dignity of labor overshadows the greatness of kings, so the most frequent incidents of our surgical life throw the curiosities and rarities of our science into the shade. Common surgery means universal surgery, and implies that which may be cultivated to the greatest good of the greatest number. What Tennyson has called "the falsehood of extremes" is one that creeps very insidiously into the daily life of the enterprising surgeon. There is a tendency to argue from extreme or rare and individual cases, and to lose sight of broad and collective issues. How often we see elaborate and able papers written with a view to deduce a theory or a practice from a particular and eccentric instance, and the paucity of material concealed by an overshadowing cloud of science condensed from the literature of half a dozen modern languages. This "paper making" or encyclopedic style is destructive to a fine cultivation of our science, but it is a less evil than that which it conceals—the undue craving after originality. Every second surgeon wants his name connected with an operation or an instrument, and in this age of hot and unwholesome competition the hunger is disastrous to the quiet and perfect digestion of abundant material which waits on normal appetite.

As far as my sight reaches I can see no direction in which the craving for novelty and originality has caused men to overstep themselves more than in the operations undertaken so often and with such a light heart for the relief of some forms of obstruction of the bowel. The hateful expression that "there is practically no danger in opening the peritoneum" is ever before the reader in these days, and, as regards a class of cases I wish to speak of, a more false or poisonous teaching was never promulgated.

It is more than five years since I read before this Section of the Academy a paper "On the Treatment of Acute Intestinal Obstruction due to Collections within the Lumen of the Bowel," and I am here now to repeat with every force I can, and with what added weight time, experience, and the position I now hold, may give to my words, the doctrines I then enunciated.

Do not let anyone misunderstand me—although I hold that we live in a time when there is too free a resort to operation in general, and although we may look for a subsidence of the wave and a return to a normal level—yet I have no cry to raise against the general advance of the operative treatment of the bowel—that would be foolish as well as futile. I have no word to say now against laparotomy in any class of cases save one, and even in that class I make no wholesale condemnation, but only urge that it shall be adopted after grave consideration and in selected instances. My remarks do not apply to obstruction due to neoplasms growing in the substance of the bowel, or to pressure on it by peritoneal or intraperitoneal material; but to those very common cases in which, owing either to an atonic intestine failing in its peristalsis, or a normally strong one becoming overloaded by its contents, the balance between the propulsive power of the bowel and the load it has to move is destroyed. The result is the decreasing power of the gut, its extreme distension, and the production of the condition named ileus paralyticus. We seldom see these cases until they have arrived at an advanced stage, until great addominal distension has taken place, and until the issue is very evidently one of much gravity.

I have seen a great number of such cases in my own practice and in that of others, and I wish to reiterate the opinion I have already expressed that laparotomy is in them an extremely fatal operation, and should be undertaken only when other legitimate means have been exhausted, or where they are evidently improper owing to the advanced stage or general condition of the case. To formulate rules as to when or in what condition such an operation might be undertaken is not possible except to the book-surgeon. The man who has practical experience knows that abdominal surgery can not be reduced to a formula, and it is long experience and the tact which may be cultivated, but can not be conferred, that teach us when we must and may open the abdomen in ileus paralyticus. To be sure, even the most

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skilled may fall into the error of delay, and there is no case so surrounded by doubtful problems as that of which I am speaking.

As regards antecedent treatment I have not much to add to, and nothing to subtract from, what I have already urged in the paper I have quoted.

Of the ordinary local measures, such as the application of heat and rubefacients, I have a growing dread. I have never seen them doing substantial service, and I repeatedly witnessed their production of such superficial redness and inflammation as served to obscure diagnosis and increase the dangers of operation. If poultices or massage be employed they should be used in such a degree as to soothe or stimulate, but not to produce irritation.

Of the value of belladonna, if used freely and early in the case, I still hold a favorable opinion, and I am convinced that its best therapeutic effect is obtained by administering it if possible uncombined with opium. I have nothing to take from, or add to, the ideas I have already expressed about this drug. Its action is understood, and its administration logical. It relieves pain, while it does its work. It finds its chief use in those cases of peristaltic paralysis due to tympanites or fecal accumulation, and as these are most often seen in obese persons, and are attended by great meteorism—both conditions which render operation extremely dangerous—this drug is often an alternative with the knife. It should be given in full and repeated doses, and pressed until it shows its constitutional effect by producing either dilated pupil or dryness of the throat. The latter symptom is that most usually seen. It is perfectly useless employing this drug unless it be administered to its full extent. It may generally be combined with calomel. It is remarkable that whereas the tolerance of belladonna when given in chronic obstruction is very variable and its employment requires caution, it is extremely well borne in acute cases. The weak and impeded heart which is present in so many examples of acute obstruction is materially aided by the use of belladonna, which is a most excellent cardiac stimulant.

Of opium itself I still have a respectful terror; it masks symptoms so much that it is capable of being a very destructive agent. Nothing but severe pain indicates its use, and in view of the vomiting which is generally present, it is best employed in the form of morphine, and best administered by the hypodermic method.

Of the early employment of purgatives I am even less afraid than formerly, but I have somewhat modified my opinion as to the best drug to use. While I have not relinquished calomel, I rarely employ it except in combination with belladonna. I have a growing fondness for salines. I generally use the sulphate of sodium, and give it in hourly doses of one or two drams until an ounce or more has been administered. The worst that can result from the use of a cathartic that fails to purge is distubance of the stomach, and this unhappily is such a usual incident of these cases that it is of less moment than it otherwise would be. The difficulty of giving a purgative is often very great on account of the vomiting which exists, and in such cases their administration by the rectum is occasionally successful. Before using a purgative in this way the rectum should always be washed out with warm water. The greatest therapeutic desideratum of our day is a method of catharsis by hypodermic medication; and whoever can discover a purgative capable of this mode of introduction will have done as much for humanity as Jenner or Simpson. Nothing is more perplexing than the problem of how to purge a patient whose stomach rejects everything that is introduced into it.

Of all the points in the treatment of an overloaded or paralyzed bowel there is none on which my convictions remain stronger, or in which, pleasant to relate, I have seen more improvement in method than in the use of the long enema tube. I have spoken in no uncertain fashion of the uselessness and danger of that instrument called "O'Beirne's tube," all the more awful because it was—and, I fear, still is—the custom to teach that it is safe, and its employment so free from danger that even unskilled persons may use it. Mr. Treves was, perhaps, the first writer to cast discredit on this hoary impostor. It is not enough to recognize its danger unless we also admit its comparative uselessness. Life may be destroyed by it. It is rigid enough to perforate the bowel; and I know cases in which this result has, by a little untrained energy, been achieved. I will undertake to perforate the coats of any average rectum with an ordinary gum elastic long tube, such as is usually supplied by instrument makers; and what can be done may be done, if either enough will or sufficient ignorance be present. So much for its danger; what of its uselessness? I contend that no mechanical effect can be gained by the introduction of fluid into the bowel which is not possible with an instrument 9 or 10 inches long, assisted by the natural penetrating quality of water, by gravitation produced by the posture of the patient, and such gentle pressure as that afforded by the use of a tube to which I shall presently refer. The absurdity of supposing that a pipe can be passed through the sigmoid flexure must be evident to those acquainted with the anatomy of that bowel; and the obvious explanation of the instances where, on external examination, it seems to have been done, can be a difficulty only to the tryo in the dissecting room or dead house. The length of mesentery possessed by the sigmoid bowel will often permit it to be pushed into the upper zone of the abdomen by the intrusive instrument. Nor must we overlook the danger of the force with which an injection can be introduced by the powerful pump usually employed with the long tube. I have seen a bowel which had been ruptured with fatal effect by this agency alone. As regards the use of medicaments other than water, and supposed to be solvent—such as oil or oxgall—I disbelieve in their efficacy. They have no effect except whatever moral one they may exercise on

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the patient or his friends. All that can be done, can be best done by warm water alone.

For some years past I have used but two instruments for giving enemas. One is an ordinary Higginson's syringe, to the nozzle of which a No. 12 or 14 red rubber catheter has been attached. For the daily purposes of the rectal toilet, or in cases where the injection is to be retained, or ejected by natural effort, this will be found perfect It is absolutely safe, and quite painless. It can be used in the most tender infant or the most callous adult; and in instances where injection is called for in the presence of inflamed piles, it is a blessing without any disguise.

The second instrument is an ordinary red rubber tube four-eighths to five-eighths of an inch in diameter, such as is used for washing out the stomach. It is convenient to have circles marked at 3, 6 and 9 inches from its extremity, so as to know what length of it lies in the rectum. A large funnel should fit the dilated extremity and should be transparent, so as to allow the fluid, which is being introduced, to be seen.

The patient lies on his back or left side with the pelvis raised, so as to facilitate the passage of fluid into the sigmoid and descending colon. The only fluid that should be used is warm water, and 8 or 10 gallons of it may be employed at one sitting. The surgeon sits on the right of the patient's bed, introduces the end of the tube, and retains it in position with his left hand, while with his right he holds the other end of the tube, into which the funnel is inserted. The tube is introduced 3, 6 or 9 inches, as may be indicated, and should be occasionally moved up and down in the anus by the left hand. An assistant pours water in the funnel, and the pressure may be varied and adjusted by the height to which it is raised by the operator. The left hand can be used at any moment, when the pressure in the rectum becomes painful, to pinch the tube, and stop the flow. When as much water has been introduced as can be borne, the funnel is removed, that end of the tube lowered to a basin placed on the floor, and the fluid allowed to run out of the bowel. By repeated operations of this kind large quantities of water may be used, and the bowel emptied without the patient being exhausted by straining or by the necessity of changing his position. The solution of feces and expulsion of flatus are assisted by the pushing in and out of the tube which I have indicated, and by the varying hydrostatic pressure, caused by alternately raising and lowering the funnel at the free end of the tube.

The advantages of this method over older ones are as follows:

1. The tube is soft and cannot cause injury.
2. The fluid pressure can be regulated to a nicety, and can not be made excessive; as if undue pressure threatens, regurgitation into the funnel takes place.
3. Enormous quantities of water can be used.
4. The currents created by altering hydrostatic pressure have a powerful solvent effect on the feces.
5. The operation necessitates no exertion on the part of the patient, no change of position, and can be carried on for a long time without causing exhaustion.

I trust I may be excused for entering into a detail of this kind in the presence of so many accomplished surgeons; but there are many young ears present into which my words may pass. I cannot but regard this apparently simple procedure as one of the greatest improvements which has been introduced into the treatment of bowel obstructions. I have avoided many laparotomies by employing it, and I believe have seen a number of lives saved. Like all other surgical practices, it gains value by experience; but I am convinced that those who patiently employ it will esteem it as highly as I do; and I earnestly urge on my younger colleagues the abandonment of the old rigid tube and the adoption of the simple rectal armament included in the two instruments I have spoken of.

It is not alone in cases of fecal obstruction that this method finds its use. In every instance where it is sought to unload the bowel it will be found of service. It may be used with excellent effect in the paralysis of peritonitis, and will, in that difficult case, produce evacuation where other means have failed.

There is no organ of the body which requires more tender treatment than the bowel, and none which is so often left to be dealt with by the unskilled or uneducated. Many surgeons delegate the use of the enema to an assistant, as if this potent engine were unworthy of their own attention, and many who use it employ force. "No force" should be the postulate of our work with the intestine. We cannot be too persuasive, and it is because so much bad practice with regard to the use of the enema is followed, that I have ventured on such an occasion as this to urge my views against the use of a rigid tube, and to plead for one which has both complete safety and infinite advantage in point of merit. I offer you no weary list of cases, because, after all, they are useful only to substantiate opinion, and if you can not accept a man's deliberate opinion you are not likely to put faith in his cases. Cases can be twisted to prove anything. In such a position as that which, by the kindness of the Fellows of this College, I occupy, a little dogmatism may be excused, and I feel so strongly about this matter of the tube that I have ventured to deal with it in preference to some more brilliant or alluring topic. I beg you to believe that if I speak forcibly it is because I feel conviction, and when I argue for the total abandonment of the older form of tube I desire to assure you that any words I use are spoken with a full recollection of the gravity which my office attaches to them.

Of course the great difficulty to be overcome in acute obstruction is that of diagnosis, and even to the most experienced no finality is possible. There is no branch of surgery in which extended clinical observation and careful reasoning work better together. A simple process of logic will help the most trained clinician to a true conclusion. No cases afford more opportunity for the display of high surgical qualities than those of

which I have spoken. Given the proper faculties of observation and deduction, the two qualities which combine to produce great surgical fitness are Thoroughness and Resource, and in the management of obstruction of the bowel there is the most ample opportunity for their development.—W. Thornley Stoker, in the *Dublin Journal of Medical Science.*

Removal of the Gasserian Ganglion for Neuralgia.—Caponotto (*Il Policlinico*, February 1, 1895) reports a third case of this operation. The patient was a baker, aged 20, who from childhood had suffered from dental neuralgia due to caries, for which he had the worst teeth extracted. About two years ago he noticed a tingling in the left cheek, lasting about a week, then burning pain starting from the left infra-orbital foramen. The pain was at first limited to the inferior palpebral margin, radiating to the external canthus and down to the angle of the jaw. The attacks lasted from one to two minutes, and were repeated every three or four minutes. They were less frequent, but more severe, during the night. He gave up work for three months. The pain then began to invade the forehead and parietal region, radiating to the upper neck and the external branches of the supraorbital nerve. He tried potassium bromide, 3 to 4 grammes, daily, then quinine and potassium bromide for three months without benefit. He was admitted to hospital on February 18, 1891. He was fairly well developed; the special senses were unaffected; there was slight hypertrophy of the left side of the face, with ptosis and edema of the left upper eyelid. The conjunctival vessels were injected; there was a pustule on the external corneal margin. The left angle of the mouth was slightly drawn upwards, and the tongue deviated to the left. There was no difference in tactile sensibility on two sides; sensibility to pain was somewhat diminished on the left side. He complained of a burning sensation and pain in the left external canthus every two minutes, lasting ten to twenty seconds. During the attacks there was spasmodic contraction of the muscles of the left side of the face, with abundant salivation, lachrymation, and nasal flux. The conjunctival reflex was sluggish on the left side. All the organs of the body were healthy. Antipyrin, antifebrin, phenacetin, bromide of gold, methylene blue and electricity were tried, but gave no relief. An operation by the Rose and Kronlein's method was performed on May 18, 1891. Immediately after the operation high temperature set in, with vomiting of blood and blood-stained fluid through the nose and mouth, and depression so great as to prevent any examination of the condition as to sensation, etc. Death took place four days after operation from acute septicemia. The post-mortem examination showed septic inflammation of the soft parts about the wound, and meningitis, laceration of the Eustachian tube, complete destruction of the Gasserian ganglion. A cholesteatoma the size of a nut was found just where the root of the trigeminus enters the pons; this evidently was the cause of the neuralgia. As to the technique of the operation, Caponotto opened up the foramen ovale with a chisel and mallet instead of a trephine, and used a sharp spoon instead of hooks in the removal of the ganglion. The foramen ovale was made the center in opening the skull. At the time of operation Capponotto was ignorant of Rose's action with regard to the danger of lacerating the Eustachian tube, and the way to avoid it.—*Brit. Med. Jour.*

Castration in Hypertrophy of the Prostate Gland—In an editorial of the *University Med. Magazine*, castration in suitable cases of prostatic hypertrophy is regarded as an advance in surgery (*Brit. Med. Jour.*). Hitherto, it is held, the surgeon has been unable to afford distinct relief from the distressing symptoms of an advanced case of this description. The difficulties and the high mortality of the suprapubic method have led to an almost total abandonment of this operation for prostatic disease, and perineal prostatotomy is little more than a palliative measure. In view of these facts it is not strange that surgeons should have presented White's suggestions to patients suffering from the consequences of prostatic hypertrophy, nor is it unnatural that such patients accepted this chance of a relief from a condition that in many cases was rapidly and surely impairing the health of a person otherwise vigorous and, apparently, without this trouble destined to enjoy many additional years of life. With the testes already or soon to become functionless, and with the prospects of a long period of intense suffering, which will be relieved only by death, sentimental objections are not to be regarded, and the problem of securing relief without placing life in danger is the only one entitled to consideration. Since White first suggested this treatment in 1893, reports of eighteen operations have been published. All these have been more or less successful, and usually the relief from the distressing symptoms and the shrinking of the prostate have been marvellous. The least favorable cases have experienced infinitely greater relief than has been obtained by any method hitherto employed. At least as many unpublished cases have been operated on with equally favorable results. There have been no deaths from the operation. Castration, however, is not indicated in every case of prostatic enlargement or urinary obstruction. Cases of prostatic abscess, prostatitis, tumors of the prostate and the region of the neck of the bladder, and other forms of obstruction in the neighborhood of the prostate must be distinguished from true prostatic hypertrophy, as without such discrimination both surgeon and patient will be disappointed, and the operation will be brought into unmerited discredit.

The Treatment of Intestinal Obstruction.—Physicians and Surgeons are still far from agreed on the precise indications for surgical intervention in cases of intestinal obstruction (*Medical Press and Circular*). The physicians, on the one hand, point to numerous re-

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coveries from the most desperate plights obtained, or, at any rate, facilitated, by purely medical means, while the surgeons attribute the comparatively large mortality which follows operations undertaken for the relief of this condition to the fact that the patient does not come into their hands until medicine has done its worst and the conditions have become so unfavorable that all the skill in the world must often prove ineffectual in averting the fatal termination. The subject has come up for discussion several times during the past few weeks, without apparently bringing us any nearer a *modus vivendi*. One variety of intestinal obstruction which has received special attention is the comparatively rare form in which the obstruction is due to the impaction somewhere in the intestinal canal of one or more gall-stones. Although the idea of surgical intervention naturally occurs to one as the speediest and most certain plan of affording relief in this condition, there are numerous instances on record in which persons apparently on the verge of dissolution have unexpectedly recovered, the calculus having at last succeeded in finding its way past the seat of obstruction. As it can only in very exceptional cases be possible to diagnose the exact nature of the condition previous to operation, the question of the treatment of this precise lesion does not often suggest itself either to the physician or the surgeon, the latter only being enabled to ascertain the nature of the obstruction when he has cut into the abdomen. In any event, cases of death from impacted gall-stones are so rare that many surgeons in active practice have never met with a single example, and the various museums attached to our medical schools contain few, if any, pathological specimens illustrating the morbid appearances.

Statistics appear to teach us that surgical intervention in desperate cases holds out very little hope of a successful issue, and until cases have become surgically desperate physician and patient alike are loath to abandon the usual measures in favor of the laparotomist's knife. A dispassionate review of such statistics as are at present available seems to justify the assertion that less lives would be lost by strict adherence to medical treatment to the bitter end, than would be saved by early surgical intervention. Undoubtedly the majority of cases of intestinal obstruction from all causes yield to the milder plan of treatment, and the complications which are so frequently present in the severer cases are but too apt to stultify the surgeon's skill. Moreover, as a matter of fact, the question of medical *versus* surgical treatment cannot be said to present itself except in a few large towns which are fortunate enough to possess surgeons with the experience and the courage to undertake such operations with a reasonable prospect of a successful issue. In the country, public opinion would not sanction immediate resort to laparotomy, and practitioners, whatever their individual proficiency, would hesitate to incur the responsibility of advising or performing such operations.

A gall-stone in the intestines is a troublesome guest. Even when it does not forthwith bring about a crisis, it is apt to set up attacks of intestinal obstruction from time to time, either by becoming impacted in the ileo-cecal valve or by causing spasmodic contraction of the irritated walls, or, as in two cases recently published by Mr. Mayo Dobson, by determining volvulus. Cases such as these are of necessity only amenable to surgery, and when this is not obtainable must end fatally. Even when the surgeon discovers the nature of the obstructing body, the question remains, what ought he to do with it? Should he try to push it along the canal until it has cleared the ileo cecal valve; should he endeavor to break it into pieces by needling through the coats of the irritated intestine; or is he justified in incising the gut and removing the stone through the aperture? When it can be forced or coaxed through the valve it would appear to be tolerably safe to leave to Nature the task of expulsion, but when it comes to choosing between needling and removal through an incision *ad hoc* few surgeons would hesitate to prefer the latter, recent advances in intestinal surgery enabling this to be done without adding materially to the patient's risks.

NOTES AND ITEMS

The Rocking-Chair as a Therapeutic Measure.—Dr. Laine declares that by resorting to a slow and regular rocking motion after meals, gastro-intestinal peristalsis is stimulated, and persons whose digestive functions are habitually sluggish thereby experience marked relief. He especially recommends this measure in atony of the stomach. The rocking-chair should be so constructed as to be set in motion without much effort, and the inclination of the axis should be sufficient to place the patient in an almost horizontal position.—*Lancet.*

Old Age.—During the past year, in the obituary column of one of the leading London papers, the deaths of 7,129 were announced. Of these it is stated that 998 had passed by ten years the age which the Psalmist said constitutes the span of human life. There were no fewer than five centenarians in the list—two men and three women. In the news columns of the same joural no fewer than thirty-five centenarians, in addition to the above five names, appeared. Ireland, and particularly county Cork, has furnished the most remarkable instances in the past year of persons having attained an age considerably beyond 100 years. In July there died near Middleton, county Cork, a widow whose age was vouched for as 115. At the time of her death she had a daughter living with her, aged 85. In the same neighborhood in September a man died at the age of 112. Another, who died at the age of 105, was at work upon his farm within six months of his decease. A woman

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who died in December, aged 110, had a vivid recollection of the landing of the French at Killala. On January 9, 1894, at Manchester, the death took place of William Hampson, who claimed to be the Queen's oldest subject, and who had seen his 115th New Year's day in 1894; he had as a boy heard John Wesley preach in Trinity church, Salford. Two of his sons were killed in the Crimea, and four of his uncles fell on the field of Waterloo.—*American Lancet.*

Billroth on an International Language.—In a letter written shortly before his death to Dr. Jankau, Professor Billroth expressed himself as follows upon the choice of an international language: "I would recommend the most simple of the Romance language, that is Spanish, as a common speech for the learned; after that would come Italian and French, and among the Germanic tongues, English only. The latter would be by far the most suitable of all, for it is also one of the simplest. But as the Latin races are so absolutely without the talent for learning foreign languages it is necessary, because of their other great attainments in the line of culture and science, to make a concession to them in this regard, and select a Romance tongue as the international language."—*Med. Record.*

Dr. Winslow's Treatment of Homicidal Mania.—Apropos of a number of cases of apparently causeless stabbing in the streets of London, Dr. Forbes Winslow, in a letter to one of the newspapers, made the following recommendation (*Med. Rec.*). In the case of a person who kills another in the street without motive, a certain congestion of the brain and rush of blood take place. If any one were to hit one on the nose, a blow which would cause the loss of blood, it would afford instant relief and he would no longer be actuated by the impulse to murder. These ordinary homicidal lunatics, who are sane on the surface, are the most difficult to deal with. You may talk to them for four hours and they will appear perfectly rational. Yet they will suddenly go out and attempt to kill the first person they meet. The typical homicidal lunatic, unlike the man who is afflicted with a desire to commit suicide, is incurable." He adds that the number of homicidal lunatics at large in London is greater than usual and that he is frequently visited by madmen who are unaccompanied, some of whom want to kill him, others ask to be prevented from killing others.

Prophylaxis of Ophthalmia Neonatorum.—In a recent communication to the Obstetrical and Gynecological Society of Paris, Budin recommends the use of a solution of argentic nitrate, 1 to 150, for the prophylaxis of the ophthalmia of the new-born (*L'Union Medicale*). He divides the disease into two categories from a clinical point of view—primary and secondary. The former occurs on the second or third day after birth; it is very grave if not attended to immediately. The secondary ophthalmia, occurring from the tenth to the twelfth day after birth, is less grave. Primary ophthalmia is most often due to the gonococcus or the bacillus of Weeks; secondary ophthalmia, to the streptococcus, staphylococcus or pneumococcus. Prophylactic measures are of two sorts: First, hygienic surroundings and exclusion of all contagious diseases—erysipelas, whitlow, conjunctivitis, etc.; second, the washing of the child's eyes as soon as possible after birth with an antiseptic. Crede's method—nitrate of silver, 1 to 50—is the best known. Other solutions used are sublimate—1 to 5,000, carbolic acid, 2 per cent, lemon juice, iodoform, etc. M. Budin, having noticed that Crede's solution often caused swelling of the eyelids and excessive lachrymation during the first few days, employed a solution diluted to one third—1 to 50. Of 2,004 children treated thus, 2 had cases of primitive ophthalmia. The author recommends that midwives should be compelled to use this means, which entails little trouble.—*Jour. Amer. Med. Ass'n.*

The Coroner to be a Lawyer.—The following report of the special committee of the Medico-Legal Society has been submitted to the Legislature of New York:

"To the Honorable the Legislature of the State of New York:

"The select committee of the Medico-Legal Society of New York, to whom has been referred Senate Bill No. 81, introduced January 14, 1895, by Mr. Senator Guy, entitled: 'An Act to Amend Title Four-Hundred and Ten of the Laws of 1882,' entitled, 'An Act to consolidate into one act and to declare the Special and Local Laws affecting public interests in the City of New York,' so far as the same relates to coroners, respectfully report:

"1. That they approve of the Bill so introduced by Senator Guy and recommend its passage.

"2. That they recommend that the coroner so to be hereafter chosen should be a counsellor at-law of at least ten years practice.

"3. We recommend that the Medical Examiners shall be skilled in Medico-Legal Science, and selected with regard to their professional fitness, and without reference to political considerations.

"4. We recommend that line 20, section 1779 of porposed Bill be amended by changing the words 'Police Justice' to the words 'Justice of the Supreme Court,' as the office of Coroner in our judgment under the law should rank with that of a Justice of the Supreme Court.

"Respectfully submitted, March 9, 1895. Clark Bell, Chairman; A. H. Dailey; H. W. Mitchell, M.D.; Moritz Ellenger; Wyatt Johnson, M.D.; T. H. Tyndale. Unanimously approved by the Medico-Legal Society, March 13, 1895."

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THE ST. LOUIS SANITARIUM FOR DISEASES OF THE THROAT AND LUNGS.—The experiments of Dr Paul Paquin on Serum Therapy in Consumption that have been reported in the last few months, seem to have brought about some practical results. There is now being fitted for the exclusive treatment of the diseases of the throat and lungs, and general tuberculosis, a magnificent three-story building, located on the highest point of the City of St. Louis, corner of Grand and McCrea Avenues, almost opposite Reservoir Park, in close proximity to Tower Grove Park and Shaw's Botanical Gardens. It will be handsomely equipped and is being fitted with all the modern apparatus for the latest and most successful mode of the treatment of these organs and of the safest way of subduing consumption. This Institution is probably the first one in the West devoted solely to throat and lung diseases, and the affection of the same, and it is doubtless the first one in the world established for the treatment of consumption, by the use of horse blood-serum. The demands for this therapeutic agent have been so great, and the calls for treatment so numerous, that it has been deemed advisable to establish a high class institution, where patients may receive attention nowhere else to be had. We understand that the expenses of the treatment and board will be high, but considering that it will include all the medical attendance necessary, the serum, and all the accessory treatment that may be needed, and that tuberculosis under the usual treatments heretofore pursued, including even climatic influences, are usually fatal, and that numerous people who have the means, spend fortunes traveling hopelessly from country to country, the charges have to be very high indeed, to be unreasonable. We sincerely wish all success to the new enterprise, and we think there is a great future, and a real need for such an institution in our midst. The physician-in-chief will be the discoverer of the value of the serum therapy of consumption, Dr. Paul Papuin.

IN THE AFTER-TREATMANT of a case where an "operation for the relief of an impermeable occlusion of the esophagus of five years' standing" had been performed, which operation was reported at length in the *N. Y. Medical Journal* of March 23, 1895, Dr. Augustus C. Bernays, A.M., M.D., Heidelberg, M.R.C.S. Eng., Professor of Anatomy and Clinical Surgery at the Marion-Sims College of Medicine, the operating surgeon says:

"The patient rallied fairly well after the operation, but she became greatly emaciated. Liquid food was given at short intervals and stimulants as indications demanded. In order to allay the extreme nervousness and irritability, antikamnia was given and it acted promptly and satisfactorily in every instance."

Of the further history of the case it may be stated that on the seventh day after operation, the patient took into her stomach through the natural channel the first food which had passed it in five years; and that in two months convalescence was regarded as fully established.

INFANTILE DIARRHEA and dysentery are diseases most obstinate to treat and most direful in their consequences. Pine-Apple Digestive Wine (Zumo-Anana), owing to its digestive and tonic action, always gives the best results in the treatment of these cases.

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ORIGINAL ARTICLES

Medical Evils.

BY W. R. ALLISON, PEORIA, ILL.

Read before the Peoria Medical Society, January, 1895.

Perhaps it might be well for us to digress somewhat from the usual medical subjects that are discussed at these meetings, and consider for a time a no less important subject and yet one that has a close relation to every member present, for, while it may be that our studies have made us replete in medicine and surgery, there is still in this busy career that which reminds us of self and those who are directly dependent upon us. It is to this side of life I hope to call your attention tonight.

It is lamentable but a fact that medical men as a class are poor business managers, for generosity begets generosity as certainly as cell produces cell. While a large part of these gifts are so because they can not be collected it has by repeated failure to receive a fee accustomed us to expect it and establishes a habit of laxity and contentment with a low percentage of collections—which is readily understood and seized by the people in settlement for professional services.

The laity have as yet discovered no plan upon which to measure the ability of a medical man or woman, but have found that they can save money by peddling themselves from office to office with the various diagnoses looking for the smallest fee for a guaranteed cure.

If there were no sharks in the profession, not so many empty hands, such a condition of affairs would not exist, for medical charges are not for the purpose of relieving an afflicted individual of this world's goods, but is a reciprocity with an unpaid balance on the part of the patients that causes them to have reverence for the profession; but with our continual influx of new additions to the profession of this city and the laxity of State law in the supervision of who is and who is not worthy, not viewed from a pecuniary standpoint. but in the same sense that law gives security, for without law values would be valueless. Nor do we ask for repudiation of existing laws neither for commerce or medical, but for a full enforcement of existing law until such a time when the laity will discover a means of rating correctly the genuineness of medical ability, and when they do the standard of medical proficiency will be raised and its compensation accordingly.

We only bespeak the highest good of man and give him our protection when we bind ourselves together as a medical society whose only aim is dissemination of the gleanings in our respective fields of operation, while our memorials to legislative bodies discussed and formulated by medical congregations is not the exponent of a miserly brain but is a pleading for the stay of destructive forces (controlled by man and a debt he pays for disobedience). It is not an act to replenish the coffers of their profession, per contra. It takes from the enactor that which would contribute to their financial relief.

It speaks to the masses that which banishes pestilence and mitigates pain, that which makes a mighty bulwark of the body against disease, but to-day with our city as an example, with this Society as a critic, what have we to say and answer that we have all fashions and classes of the so-called healing art represented and no visible work whereby the laity can be protected?

Mask courts of justice are sitting to protect the rights of property and person, meting justice to the law breaker with the exception of the vampires who through the press are flaunting their false promises, robbing the unsuspecting afflicted of the last dollar from the homes of their dependencies, doing so under the burning light of this Society sanctioned by our State Board of Health and protection of our municipality.

To those who make guarantees of cure, who extort exorbitant fees that no reputable man or woman of this Society would ask and flee away, leaving an unsuspecting, a neglected and blighted home where, thanks to genuine medical proficiency, the reputable and worthy are then the messengers of peace and directors of health, with ought whereof to pay but thanks, and point us to an eternal reward which is too often yours and my recompensation.

As medical representatives with the high aim of our profession we can but look upon such with contempt and as their faces decorate the advertising page and their heads are exhibited that all may behold their false rotundity of cerebral exuberance we have naught but

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a kind wish for merited success and shame for asserting impossibilities and condemn their play upon the imaginations of the uninformed.

It is with a consciousness of an obligation endowed in every man and a want to do that duty well that makes us speak to condemn this method as unbecoming a lady or gentleman.

To advertise successfully deception must be practiced, cures must be guaranteed, which will bring discredit and medical disgrace.

Such being the case with such diversity of medical talent with its representatives who have held high and done much to maintain the dignity of the profession who have set apart their lives and pursued their duties with thoroughness and consciousness of its obligations, to see their title decorate an empty head and greedy heart who by falsity—a society swell—long-haired with buckskin trousers, roam the street with an Indian war whoop, steal away their patients and return them poisoned with false notions of themselves and medicine, makes the true friend of health and the enemy of disease long for the time when there will be a true way of rating the true from the false.

We can not condemn the laity for the patronage they give to this class, for they are largely educated by flaming sheets well calculated to deceive, nor can we hope to prosecute, nor exercise the right of existing law, for the reason that we are met by a jury of men prejudiced with the belief that such laws are for the greed of the profession; therefore, it is proper that we educate the laity as to the purpose of legislation and make known its aim of removing the unfit from the profession.

Medicine and surgery is progressive, so should be its advocates. The jealousy of bygone days does not belong to the modern medical man, and he or she who would censure a medical confrere who has by right and privilege received recognizance, which proves their proficiency and entitles them to be respected for such attainments, while to speak of such with censure is to say the same of yourself, for you are one of them. The practice of medicine does not depend upon what you say about your medical associates, but upon your ability to diagnose and treat.

Backbiting, speaking ill of your brother, nodding the head, a strudge of the shoulders, has done more to belittle the profession than all medical evils combined, it makes the assertor oftentimes the author of falsehoods, makes him think little of himself and his informant thinks less of the profession.

There are two things which I have never seen succeed in medicine:

1. To speak ill of your confrere.
2. To buy your patient by charging a small fee.

I have oftentimes thought that there are many medical men who from honesty of heart asked a small fee because of the conviction that they were charging all these services are worth and in proof of this points to an individual who writes free prescriptions, makes calls for 75 cents and $1.00, abortions for $1.00 and $2.00, and you produce a man of limited ability or from a college of inferior character. The day of something for nothing has gone by.

The intricacies of professional life are such as to demand experience to formulate a proper course and the recent graduate with empty purse and no practice in his desperateness to succeed will formulate plans that the experienced know to be failures. Their charges in this time of need and perhaps lack of courage to ask for their own are made below a living price. They know not what they should do and plunge from plan to plan until their record debars them from medical associations.

The problem of how best to agree and best to live was that which perhaps first suggested medical societies and as we consider the successful adventures and most useful associations in all departments of life, we find the greatest and best thoroughly organized, and also that the practice of medicine and surgery is the most thoroughly disorganized, not because of any deficiency of ability, but because of the universal impression among the laity of the superior ability in all doctors who have a second handle to their name as member of or professor of this or that, and the energy of most societies is spent in defeating the second handle or obtain it and the society is no more.

This fact has been seized by the over credulous and has been the means of fostering a multitude of societies that exist to give a false rank to a few. It is also the lamentable cause of the multiple college staffs originated and perpetuated to add prestige and bridge the chasm of deficiency.

The dispensary scurg—that so-called benevolent fad—which has wrought irreparable damage, does not contain the true essence of benevolence but originates in the fertile brain of a keen desire for increase of practice where the dispensary physician first by the second handle to his name and announcement at a given time and place, "consultation free," where they may feel of their patient and while prescribing for the poor, directs the semi pay, the prospective pay to his private practice, which is the triumph in accepting a position upon the staff.

We codemn such a course first because if there is a duty, an honor in assisting the poor of our city, divide it among us of whom it may be said not one will turn the honest poor away; if it is a burden divide it that the time of a few be not wholly taken in administering to the poor without remuneration, of which there is much done by the medical profession of this city as shown by a conservative estimate that about four thousand dollars are given each month to the sick of this city by the medical profession alone.

In behalf of the poverty sick let us reserve for them the privilege of selecting their medical advisor and in condemnation of the practical benefit of such a course for the knowledge gained by either the practical experience or statistics of such numbers treated I think stands

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as of little use to medical science and of no consequence to the patient.

It is not reasonable to suppose that a free dispensary will excite the care and attention of the medical attendant, that is given the private patient and also the large numbers who frequent such places would make it impossible for them to receive justice, and in view of the misconception that the laity has of the benefits of such institutions, it becomes us to correct its asserted needs, and point out its errors and abuses. Keeping before the people the fact that to-day there are about one hundred dispensaries in this city, and many of them operating at a loss to its organizer, the abuse of this fact is carried to such an extent that many of those who are able to pay for medical aid, disguise their dress and deceive as to their financial condition and by such means obtain assistance for half its value if they pay at all.

A dollar's worth of merchandise brings one hundred cents alike from the high and low thirty days the limit of credit for such transactions and blacklisted for its nonconformance which is brought about by organization of the grocerman, the butcher and other business channels, for they pay to live, they must eat or die while there is not a member of this Society that has not carried their accounts from month to month and in reply to our statements have been told that their gas bill, their butcher bill, their grocery bill must be paid to maintain their credit.

I have never heard of a lost credit by letting a medical bill go unpaid, but overdraw your bank credit five dollars without a provision and your credit is doomed in banking circles. All this is brought about by business education and as previously stated that as a class we are poor business men and women. It is just as possible and even more needful that we collect promptly, that we understand each other and prohibit the recklessness of our patronage which will be equally good to patients. We can then buy better office equipments and take more interest in their welfare.

We have duly considered as pointed out by Dr. Cathell that there are two classes of poor—the devil's poor and the poor devils, the first of which does not excite our sympathy, the second receives more generosity from the hands of the medical profession than all other benevolent societies combined; there is another class called the sleek devil who knows the address of every M.D. in our city, who is the chief patronizer of the latest addition to the profession, condemns all others, who has had medical attendance for years without the expenditure of a dollar. They work the profession. They are able to pay a fee and we advocate a black list for their removal.

The poor entreat us to be cheap in our charges and make the rich pay large fees. No other business is conducted upon such principles, unless it is to make medical men pay more for the same goods than is paid by the general trade.

We have reached the time both by progress and numbers when a thorough organization is needful, no more for ourselves, but for the good of the afflicted; the masses have been robbed and humbugged until they know not what to do; they have been so treated as to discredit the name of doctor and often prefer the chances of self-treatment to the chances of selecting a medical advisor; they have been taught that the profession will give them potent poisons and protract their sickness. There is no vehicle to ride, no dress to wear, no diploma to own, which can not be imitated, until we wonder that the practice of medicine occupies the high position it does to-day in the minds of the people at large.

The time is at hand when we must protect those who look to us for protection, the necessity of this Society must be made manifest to each physician and surgeon of this city, and the benefits it affords so palpable that all will consider it wise to become an active member, its requirments for admission must be such as to disqualify the unworthy and those who have conducted themselves unbecoming of an honest physician should be discountenanced until their penitence is sincere and the stigma is thoroughly removed, accepting none with the view of covering a past or present error but hold high and firmly the credentials of admittance, and deny admission until their attainment will give this Society greater strength and by the class of our work cause them to seek early our association.

There should be closer adherence to proper rules that guide us in the problems of practice and its penalty for non-conformance should be expulsion or suspension. There should be an effort to extend the membership to every worthy M.D. in the city and formulate a fee table that there may be union, not a fixed and definite charge but a minimum rate for which a less charge, unless excused by poverty, would cause a payment sufficient to prevent its repetition.

We would earnestly advocate unison and inculcate the wisdom of always dwelling upon the good qualities of our members, and pass all imperfections, except in person you kindly correct an erring brother and in their absence protect the weak, imitate the strong, and in your business problems give preference to members of this Society for assistance.

Pursue this plan with diligence, looking well to those who are accepted into our Society, allowing immorality to forfeit your membership and stand as an organization protecting each other, elevating the good name of this Society higher, while the thoroughness and honesty of our work will make the fact of our membership in this Society our distinguishing badge between the false and the true.

In Four States.—An old doctor had been called to see a drunken man who had been run over by the cars, and upon answering a good many questions he became angry, and said (*Med. Rec.*): "I found the man in four different states—the state of intoxication, the state of mutilation, the state of unconsciousness, and the State of Ohio."

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EDITORIALS

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 914 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 914 Locust Street, St. Louis.

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The Advisability of Bacteriological Examination of All Persons Coming in Contact With Diphtheria.

The ubiquity of most pathogenic bacteria and the fact that certain diseases prevail at certain seasons of the year and more so in one locality than another, attacking one individual and leaving another intact, is so well known and has been so often discussed that it would seem preposterous to draw attention to it at any length. By not a few it is claimed even that pathogenic bacteria are in reality not the cause of disease but that the real cause are the agents which produce the predisposition in an individual and makes it susceptible to an infection which, under different circumstances, would be impossible. As long, therefore, as the factors favoring a predisposition remain, so long will it be impossible to prevent the occurrence of infectious diseases with any degree of certainty.

Examples of the innocuousness of pathogenic germs, as far as persons insusceptible to them are concerned are, for instance, the diphtheria bacilli, which have been found in the oral cavity of healthy individuals; also pneumococci which are always present in the mucus of the air-passages. Cholera bacilli are not infrequently found in the bowel-contents of healthy individuals.

A striking instance of the necessity of a favorable soil for the production of a disease has recently been reported from Wehlau, a German town in which seven cases of cholera occurred at about the same time last fall. The family members of three of these patients, numbering seventeen, were kept under careful observation and their feces were repeatedly examined for cholera bacilli. None of them showed any symptoms of disease, excepting, perhaps, a slight diarrhea. In thirteen out of the seventeen individuals, cholera bacilli were detected in the feces. Now and then the cholera bacilli disappeared for a day or two and then re appeared. This observation illustrates the necessity of a bacteriological examination of the feces of those coming in contact with cholera patients.

Would it not be advisable that a bacteriological examination of all persons coming in contact with diphtheria cases be made by the health departments of our cities? For in diphtheria we have an analogous condition with regard to the presence of diphtheria bacilli in healthy individuals.

A number of physicians, including some men of prominence, claim that, as the diphtheria bacilli are found in healthy individuals and may not be found in some true cases of diphtheria, the bacteriological examinations of our boards of health are worthless. This, in our opinion, is a conclusion too hastily drawn; for, as we have stated on a previous occasion, healthy individuals do not present themselves for examination and in all cases of diphtheria, excepting those that are complicated by a streptococcus, staphylococcus, or a septic infection, the diphtheria bacilli are found by the method employed at the present time. Cases of diphtheria associated with these secondary infections are the most dangerous ones; but they are also so easily diagnosed without the aid of a bacteriologic examination, that the latter really becomes superfluous. The reason why in clinically well pronounced cases of diphtheria the Klebs-Loeffler bacillus escapes detection in a bacteriological investigation, is well known to the readers of the REVIEW; for we have stated on more that one occasion that in cases complicated by the above infections the diphtheria bacilli escape detection, because they are not found superficially but are situated deeper in the tissues while the streptococci and staphylococci are found in the superficial layers of the diphtheritic process.

Under present circumstances we would formulate our views regarding the worth of a bacteriological examination of bacteria as follows: In all cases of sore throat in which a bacterjological examination (*i. e.*, by the culture method, not simply a microscopic examination, which is almost worthless, as the diphtheria bacilli are microscopically not easily distinguished from other bacilli) proves the presence of the Klebs-Loeffler bacillus, the case should be *treated* as diphtheria.

We feel confidently that the bacteriological examination of diphtheria, as practiced by our boards of health, although it may be simplified, improved and perfected in the manner alluded to in a former editorial of the REVIEW, is a step in the right direction, and with the

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perfection of the technique and increased experience of the bacteriologists in charge, will probably prove to be of undoubted utility and value to the community.

As to the advisability of subjecting all the healthy family members of a diphtheria patient to a bacteriological examination for the purpose of prophylaxis, we think that such a procedure would be a wise precaution and worthy of careful consideration by sanitarians and bacteriologists.

The Prevention of Blindness in Infants.

The prompt medical attention of cases of conjuncti vitis in infants is a measure of the greatest importance, and its necessity a well known fact to every physician. The good effects produced in lying-in institutions by the prophylactic instillation of a two per cent nitrate of silver solution has often been pointed out and statistics show that innumerable eyes have been saved in consequence of that measure. The necessity of a law for the purpose of checking in time the form of conjunctivitis known as ophthalmia neonatorum and thereby preventing the loss of innumerable eyes has long been plain to every member of the medical profession. Such a law has recently been enacted by the Legislature of the State of Missouri. It is high time for the enactment of this law and it is a wonder that in a highly civilized country as our own only six States haved enacted similar laws. The law has been formulated by our colleague and fellow citizen, Dr. M. H. Post, who has spent much of his time and brought all his influence and that of his friends to bear upon the Missouri State Legislature in order to accomplish the passage of the law which reads as follows:

An Act for the Prevention of Blindness in Children.

"Be it enacted by the General Assemby of the State of Missouri, as follows:

"Section 1. Should one or both lids of either eye or of both eyes of an infant become red or swollen, or should there be any discharge from either eye or from both eyes, at any time within three weeks after its birth, it shall be the duty of the midwife, nurse, or other person having charge of said infant, at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine.

"Section 2. Every health officer shall furnish a copy of this act to each and every person who is known to him to act as midwife or nurse, in the city or town for which such health officer is appointed, and the Secretary of State shall cause a sufficient number of copies of this act to be printed, and shall supply the same to such health officers on application.

"Section 3. Any failure to comply with the provisions of this act shall be a misdemeanor, and shall be punishable by a fine of not less than ten and not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment.

"Section 4. All acts and parts of acts inconsistent with this act are hereby repealed."

Dr. M. H. Post, Ophthalmic Surgeon to the Missouri School for the Blind, in drawing attention to the necessity of this law, says:

"One of the greatest afflictions to which our race is subject undoubtedly is blindness. When this comes on in old age it seems almost like the beginning of death. Usually at this time life's work has been accomplished and the unfortunate person has but few years left to be dependent upon his relatives or the State for his support; but when blindness occurs in infancy it means a life-long existence without the pleasure and usefulness which comes from sight. It means a life of dependence, either upon the relatives of the unfortunate one, or upon the State.

"Anything that can be done to lessen the number of these unfortunates should be done not only for the purpose of saving expenses to the public, but for the still higher purpose of preventing the calamity of blindness and increasing the happiness of our fellow men.

"The United States census for 1890 shows a great increase in blindness. The State of Missouri is said to lead the list. In the last thirty years the population has increased about 100 per cent while the reported number of blind people has increased 550 per cent. These statistics may be open to some criticism as to their accuracy; but after making large allowance for inaccuracy they show that Missouri has an alarming number of blind people in her population. This is particularly distressing when we know that a large percentage of these have been made so by an inflammation of the eyes which is incident to the first few days of life, showing itself usually within five or six days after birth, and which prompt and efficient treatment cures; but which, when neglected, frequently results in blindness.

"It is not an infrequent experience for the physician to have an infant brought to him, six or seven weeks old, with one or both eyes lost, and one can readily imagine the anguish that fills the mother's heart when she is told that the child, for whom she had such bright expectations, is hopelessly blind; and how her agony is intensified when she still further knows that it is the result of ignorance and carelessness, and that it might easily have been prevented.

"From the report of a commmittee appointed by the American Ophthalmological Society we learn that of five hundred and nine blind people in the public institutions of New York State 14.51 per cent were blind from this disease.

"Dr. Henry D. Noyes, quoting from Haussmann, gives the following: Of the blind in the blind asylums of Copenhagen, 8 per cent, of Berlin, 20 per cent, of Vienna, 30 per cent are blind from this cause. In Paris, among the two hundred and eight blind young subjects, 45 per cent are blind from this cause. In 1876 it was shown that among the young persons admitted to the

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blind instititutions of Austria 33 per cent had been made sightless by this disease. Horner gives in different countries the blind from this cause varying from 20 per cent to 79 per cent. In Philadelphia Dr. Harlan found in 1871 about 20 per cent of those admitted to the blind asylum of that city had lost their sight from this cause. At present 19.5 per cent of the pupils in the Missouri School for the Blind are blind from this cause. To these, who have lost both eyes, should be added an indefinite number of those whose sight is more or less injured as a result of this inflammation.

"When the inflammation is discovered no time is to be lost; it is very much like a fire in a hay stack, and requires prompt and vigorous action, therefore the bill requires that the report be made, to a legally qualified physician, at once, unless for good cause shown."

We have been informed that circulars will be distributed informing the public of the existence of the above law and of the necessity of its careful and conscientious observance, and we feel assured that by such a measure, aided by the effort of family physicians to educate the public in this matter, the percentage of blindness will be greatly reduced. The REVIEW is only too glad to aid the originators of this law in their philantropic efforts by reminding its readers that their support in carrying out the provisions of the law, is of the greatest importance.

BOOK REVIEWS

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In Twenty Volumes. Volume I. Diseases of the Uropoietic System. New York: William Wood & Co. St. Louis: J. H. Chambers & Co. 1895.

After the new science of bacteriology has taken a firm foothold and its overwhelming importance to all the branches of medicine has been adopted as an established fact by all well-informed modern physicians, it is a most timely undertaking, and one for which the publishers and editors deserve the greatest credit and support by the profession, to place before it a work of the nature of the "Twentieth Century Practice." In fact, a work of this kind has become a necessity, since there is no similar work in existence, whose teachings are in harmony with the modern advances of medicine. The last work of a similar nature was "Ziemssen's Encyclopedia" which was devoted to Internal Medicine and published before the new science of bacteriology was developed.

The "Twentieth Century Practice" will consist of twenty volumes, the first twelve being devoted to the systematic affections, including diseases of the skin and and nervous system, the remaining eight treating of the infectious diseases. The writers are, almost without exception, representative men of Europe and America.

We have before us Volume I of this exhaustive Encyclopedia of modern medical science. Its general arrangement, the treatises and numerous illustrations are very intelligible and of a most practical nature and in every respect worthy of being called "Twentieth Century Practice." The contributors of the first volume have demonstrated by their treatises that they are aware that the medical profession has a right to expect of a work deserving the high sounding name "Twentieth Century Practice"—a name replete with the most extravagant promises—to be of the highest order and a true representative and reflection of modern medicine.

This volume treats of the uropoietic system. The first article, on diseases of the kidneys, is from the pen of Dr. Francis Delafield, of New York. The classification of kidney diseases, which the author makes, is extremely simple, and assists the reader greatly in arriving at a clear understanding of the morbid changes which these organs undergo. The diseases of the renal pelvis, the ureters, and the bladder are presented in two excellent articles, by Reginald Harrison, London. These are followed by two systematic and lucid treatises on the diseases of the prostate and male urethra, by Dr. G. Frank Lydston, of Chicago. The diseases characterized by changes in the urine (hematuria, cystinuria, chyluria, pyuria, etc.), are discussed by Mr. Henry Fenwick, of London, an acknowledged authority on these affections. The albuminuria of nephritis and diabetes mellitus are not included in this article. The closing treatise of the volume is one on the diseases of the female bladder and urethra, by Dr. Howard A. Kelly, of Baltimore. In this article the author describes at length his new method of examination of the bladder and ureters in the female, which we believe has never betore been described in any text book or treatise.

The illustrations, of the first and last articles especially, are beautiful in design and execution.

In fine, the work is a great credit to the medical profession and will be welcomed by every physician who reads the English language.

Surgical Pathology and Therapeutics. By JOHN COLLINS WARREN, M D., Professor of Surgery in Harvard University; Surgeon to the Massachusetts General Hospital. Illustrated. Price, cloth, $6.00; half morrocco, $7.00. Sold by subscription only. Philadelphia: W. B. Saunders. St. Louis: J. H. Chambers & Co.

The author of this book has most admirably succeeded in an attempt to associate pathological conditions with the symptoms and treatment of surgical diseases and in impressing upon the reader the value of the association

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of these studies as a firm basis for good and intelligent clinical work. No practitioner can be thoroughly equipped for surgical work who is not also a good pathologist, and we agree with the author of this most excellent work that it is from men thus equipped that we have a right to hope that the future masters of surgery are to be evolved. The work will elucidate to a large number of practicing physicians, in a most attractive manner, many subjects with which they had no chance to familiarize themselves before graduation and may be read with much profit by every physician. The work contains 132 excellent illustrations, the majority of which are colored, and four full page colored plates. The print is large and clear. It is a book which will be largely appreciated by the practitioner and student for both its practical and scientific value.

The Principles of Surgery and Surgical Pathology. By Dr. Hermann Tillmanns, Professor in the University of Leipzig. Translated from the Third German Edition by John Rogers, M.D., New York, and Benjamin Tilton, M.D., New York. Edited by Lewis A. Stimson, M.D., Proressor of Surgery in the University of the City of New York, Medical Department. With 441 Illustrations. 1894. New York: D. Appleton & Company. St. Louis: J. H. Chambers & Co. Price, cloth $5; sheep, $6.

The surgical works in the English language adhere in the main to the old custom of separating the subjects of general surgical injuries and diseases of the various tissues from the general group of inflammations, surgical complications and general surgical diseases and have combined them with their numerous and varied local forms in regional surgery, and the pathology of each individual subject has received comparatively little attention. The German, and to some extent the French, text books on surgery are divided into two distinct parts, the "general" and the "special." Under "general surgery" are included not only the general affections and pathology, but also the pathology and principles of treatment of the injuries and diseases of the various tissues, while the "special" part is devoted to the consideration of their local manifestations in general surgery.

It is on account of these facts that the translation of Tillmanns' surgery was undertaken and the selection of this work for the purpose of supplying the want of the medical student as well as the practitioner has been a wise one. It is a very readable book, containing everything of importance in as concise a form as is compatible with the thorough understanding of the subject and we feel confident that the work will meet with the approbation of all the teachers of surgery as well as the profession in general. The print is plain and the illustrations are good. We can conscientiously recommend the work to every practitioner and student.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, March 16, 1895; the President, F. D. Mooney, M.D., in the Chair.

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Dr. L. H. Laidley presented two specimens of "Fibroids of the Uterus." The first specimen was from a woman, 30 years of age, single, who had been suffering for twelve years with severe hemorrhage from the uterus. She had been subjected to all kinds of treatment, including curettement with the dull and sharp spoon, packing of the uterus, and the administration of ergot. No relief from the symptoms followed, and she was almost exsanguinated when first seen by the speaker. The great loss of blood had confined her to bed eleven months out of every twelve; she was very nervous and discouraged. No lesion of the heart could be detected, and the kidneys were found normal, as far as could be determined by a chemical and microscopic examination of the urine, although the quantity was at first only 12 to 14 ounces. Examination of the abdominal and pelvic organs revealed no disturbance except a symmetrically enlarged and tender uterus. Although no fibroid could be detected its presence was suspected, and removal of the uterus was advised.

It is the operation advocated by German surgeons, and is the one to be preferred, if the observations, recently published by Goodell, prove to be true; namely, those concerning the disturbed mental state following removal of the ovaries and tubes. Besides, the hemorrhage came from the endometritis, and it is doubtful whether any operation except hysterectomy would have given relief from the symptom.

The Pean operation was performed last Monday. The organ was found enlarged about one-half and in it was lodged a submucous fibroid about the size of a pigeon's egg. Ligation of the uterine artery would, evidently, not have been of permanent benefit, as the collateral circulation would soon have re-established the hemorrhage. Then, the woman was poor and obliged to support an aged mother; so that permanent and immediate relief was imperative.

The second specimen was removed, by celiotomy, from a married woman, 28 years of age, who had experienced a sudden, sharp pain upon lifting a heavy weight against the abdomen. She experienced a sensation as if something had given away, and from that time became very much prostrated. She was first seen by speaker at 10 P.M. on Tuesday, when she had severe pelvic and abdominal pains, a hard, wiry pulse of 120, temperature 104°, and a pinched expression of the

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countenance; altogether presenting a typical picture of septic peritonitis. A fibroid tumor was easily determined by abdominal palpation. It was only partially movable, and was situated in the median line extending above the umbilicus

Laparotomy was done at 10 o'clock on the following morning. Upon opening the abdomen a considerable quantity of peritonitic fluid and pus escaped. The tumor was readily delivered and separated from the uterus. The appendages, which were found diseased, were removed. A pyosalpinx had existed on one side and had ruptured by lifting the weight, thus producing the septic peritonitis.

Dr. S. Pollak asked Dr. Laidley if he believed that the submucous fibroid had existed for twelve years, and if it had not grown during that time.

Dr. Laidley thought that it had existed during the twelve years. It is the location, and not the size, of a tumor which gives rise to the various symptoms. A small submucous fibroid might produce a great deal more disturbance than a much larger tumor differently situated.

Dr. E. C. Gehrung considered the operation perfectly justifiable, especially after other therapeutic measures had failed to give relief. Removal of the adnexæ might not have stopped the bleeding as completely as the removal of the source of the blood. It remains to be proved, however, whether the hemorrhage was caused by the fibroid, or whether it was due to a diseased condition of the uterus. The bleeding might have been caused by any obstruction to the circulation, such as varicose vein.

A point deserving emphasis is the mistaken interpretation often placed upon the cause of disease, by results obtained from certain operations. For instance, the removal of the uterus in this case will affect a cure, because the blood supply is cut off, while the cause of the trouble might have been extraneous to the organ. So, too, where uterine displacements are the cause of great trouble. Although the ovaries might be perfectly healthy, a cure follows their removal, and the operation is credited with the good result; when, in reality, a change in position and location of the uterus was produced at the same time and is responsible for the relief obtained.

Dr. E. Gregory said that, assuming the tumor to have been the cause of the hemorrhage, only the nutritive activity could have caused the great flow of blood. We know that the submucous fibroids, where they determine hemorrhage, are growing tumors, and the irrita tive activity of this overgrowing structure determines the increase of blood to the part. But, if, as has been stated, the tumor was small and did not grow, then, certainly, the incentive for plethora of the womb was wanting in that site; so that it seems there are irreconcilable statements here. There must have been some other cause for the hemorrhage.

Dr. Laidley said he had brought the specimen before the Society in order to determine the cause of the hemorrhage, if possible; he is in doubt and should like to be informed. He asked Dr. Gregory's views as to the origin of the hemorrhage.

Dr. Gregory had never seen the case, nor did he hear the history except the point referred to, and, therefore, could not pretend to explain the hemorrhage. He merely discussed the very assumed basis upon which speaker rests his theory—that the tumor was the cause of the hemorrhage—and would get him to change his base.

Dr. Laidley asked Dr. Gregory, if he does not consider hemorrhage from the womb, lasting as long as this, warranting removal of the organ?

Dr. Gregory had seen many hemorrhages from the womb lasting weeks and months, but extirpation of the uterus had never suggested itself to him as a remedial measure. Assuming the tumor to have been the cause of the hemorrhage, he did not consider extirpation a warrantable operation. Neither a metritis nor a small fibroid would warrant such procedure.

Dr. H. H. Mudd did not think that the tumor was the sole cause of the hemorrhage, or that the hemorrhage was so excessive or the sole cause of the patient's bed ridden condition. From an examination of the tumor, he judged it to be of the submucous variety. There can be no question that the uterus is enlarged, and that the persistent engorged condition has been the source of constant irritation and has produced a peculiar nervous state of the patient, which was, evidently, largely responsible for her bed-ridden condition.

There can be no question that the hemorrhage should have been corrected as early as possible, especially in a patient whose physical condition was so reduced. She had been subjected to the ordinary treatment and applications, and since these proved insufficient, removal of the uterus seems to be justifiable.

Ligation of the uterine arteries is not a very simple procedure, and the congestion is soon re-developed from the collateral circulation. Removal of the uterus was probably the better operation.

Dr. Laidley said that ligation of the uterine arteries had not been done sufficiently often to give any definite data. Of course, this was a very extraordinary case and must be judged by itself. Another reason for doing a hysterectomy is the pronicity, recently demonstrated, to a change from benign to malignant epithelioma in cases of glandular metritis which have resisted curetting.

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Dr. N. B. Carson presented a specimen of "Cyst of the Cerebellum," removed yesterday at post-mortem examination, from a boy five years old. About one year ago patient began to complain of pain in the back of the head, which came on in paroxysms of two or three daily every two days, and was accompanied by throwing back of the head, this position being the only one which afforded patient any relief. His general health continued good, however, patient indulging in the ordinary childish outdoor occupations. The head had been abnormally large from infancy.

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Three months ago he had an attack of measles, and from that time the pain became worse and other grave symptoms developed. Towards the end of the attack he had a slight spasm. The gait became unsteady, and when seen in January the child was unable to walk without assistance, and had a tendency to fall to the right side. The sight also, was very much impaired, and just before the operation the child was hardly able to distinguish light from darkness. It could distinguish objects very slightly, but could not define their character. When seen in October, the parents were advised to have an examination made by an oculist. They did not comply with the advice and were again urged to do so in January. Although promising to have it done they changed their minds, and no examination was made until the child was brought to the hospital two weeks ago. Dr. Pollak then conducted the examination.

A physical examination was made in October, at which Dr. F. R. Fry assisted. At that time percussion on the left side, just in front of the coronal suture, elicited pain, which extended as far back as the parietal eminence. A peculiar "cracket pot" sound was produced by percussing in front of the coronal suture on the left side, and a tympanitic sound, over an area about the size of a dollar, immediately behind the coronal suture on the same side. A sound like the tapping of a drum was heard by placing the ear on the right side during percussion. It was determined that there was some ventricular trouble; at least, dilatation of the ventricles, although the cause was not definitely determined.

When seen in January the above sounds had become very much augmented. The parents were offered very little encouragement; but a tapping of the ventricles, with a view of relieving the pressure, was suggested as the only remedy.

Two weeks ago the child was brought to the hospital and, after a careful examination and preparation, the operation was performed. A point was selected three quarters of an inch to the left of the middle line, midway between the parietal and upper end of the Rolando fissure. A trochar, the size of a No. 6 French sound, was used. After entering three quarters of an inch, the trochar was stopped by structure that was much more dense than the tissue through which it had been pushed; so that it was deemed advisable to withdraw it, lest some injury should be produced by using greater force. A second attempt made at a point a little lower down led to the same obstruction. The third time the instrument was carried straight down, and after passing through three quarters of an inch of brain substance the cerebro-spinal fluid began to empty itself through the canula. About three ounces of fluid escaped in this manner. A horse hair drain was introduced through the canula and allowed to remain. On the following morning the dressings and pillow were saturated with the flow. The temperature, on the evening of the operation, went up to 104°; it was 104° the next morning, 102° at noon, went up to 103° that evening, and gradually receded to normal, at which point it remained until the evening before death, when it rose to 105°.

At the post mortem examination the tumor presented was found in the left lobe of the cerebellum. It was very dense, cone-shaped, about eight inches in circumference, and three inches from the apex to the base. It appeared to form a tent, occupied almost the entire left cerebellar lobe, pushing the middle forward. It was entirely separate and distinct from the brain substance, and could, therefore, probably have been removed, giving the patient a chance to recover, or, at least, relief from symptoms.

Dr. S. Pollak said that it was very difficult to examine the eyes and the result was, therefore, very unsatisfactory. It was not possible to make the patient look in any definite direction, his eyes moving in any way without any order. The eyes were clear, the pupils dilated, there was no sign of choke disc present, but evidently atrophy of the pupils. There was apparently no perception of light.

Dr. H. H. Mudd did not know how the trouble developed, and believed that Dr. Carson had not given all the data upon which he had based his diagnosis. The data must have been more full.

The enlargement of the head which had existed since infancy was evidently not due to the cerebellar tumor alone. The dilatation of the ventricles was partly responsible for that. The diagnosis of dilatation of the ventricles and cerebellar disturbance, the latter based upon the disturbance in gait and sight, was probably as correct as could be made. The history fails to show the relationship which the two conditions bore to each other; whether they were coincident or dependent, one on the other; which of these conditions was, first, whether the hydrocephalus preceded the development of the tumor or *vice versa*. In all probability, the two conditions developed independently of each other; that is, the tumor probably occurred secondarily. It was a large growth to have developed in the cerebrum without producing more constant symptoms. This may be accounted for from the fact that there already existed disturbance of the ventricles, the skull was large, and the tumor probably had a better chance to grow on that account.

Even if the tumor had been removed by operative procedure, it is doubtful whether the ventricular disturbance would have been cured by drainage. We know that operations for dilatation of the ventricles are very unsatisfactory; although we do have good results from drainage, they are very few. However, in this case, the operation was a justifiable one, and the result was unfortunate because the conditions were in themselves difficult to meet.

Dr. J. Ellis Jennings had examined the eyes of this patient, together with Dr. Pollak, and noted the extreme dilatation of the pupils, which reacted to light stimulus, however, although the effect was only a temporary one. The oculo motor apparatus was but partially involved. The child could open or close the up-

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per lid, and could move the eye to the side and downward, but not inward or upward. It was not possible to keep the eye quiet for any length of time to permit the examination of the fundus; but the arteries and veins were found to be very small, and it could be easily seen that both discs were atrophied. Judging from the time involved in the development of the trouble, it was decided that there must have been a preceding neuritis before the atrophy had occurred. As far as could be determined, the child had no perception of light; and this fact, coupled with the preservation of the pupilary reaction, led to the conclusion that the trouble must have been a deep-seated one.

Dr. Chas. Barck emphasized the necessity of bringing the whole brain when demonstrating lesions of this organ; especially in circumscribed lesions, where our knowledge is still very deficient. Every case examined carefully may add new light to our knowledge. In the case presented, it would be of extreme importance to examine the optic nerves or tracts directly.

Another point of importance is to explain the tympanitic sound described. This sound is heard only in cavities filled with air, or partially filled with fluid, but not in cavities completely filled with fluid.

The point suggested by Dr. Mudd is also of importance; namely, giving the degree of dilatation of the third ventricle. Here, again, a definite description of the brain has not been given and is of importance. Speaker believed that the tumor was the primary trouble and the dilatation consequent; for, we find dilatation of the third and other ventricles in a very large number of brain tumors occurring at all ages.

Dr. Carson explained that the reason for not bringing the whole brain was, that a post-mortem was obtained only after a great deal of percussion. It was allowed on consideration that no part of the brain should be removed. After the brain was opened and the tumor was exposed, the father was called, and after a great deal of argument and really without his consent, the tumor was removed.

The conditions found post-mortem were as follows: While the head was larger than a normal skull, it was not excessively enlarged. The cranium was very much thinned, the sutures were separated and union was ligamentous, so that the different portions could be moved upon each other. The dura was adherent posteriorly, the adhesions were of long standing and extended almost as high up as the Rolandic fissure. A clot about an inch by an inch and a half was found in the dura over the parietal region, and was evidently produced at the time of the operation. The opening at this time was made with a chisel, and large enough to admit the rongeur forceps, with which it was then enlarged. This procedure is certainly to be condemned in cases of this kind. The brain was anemic and both ventricles were very much dilated. They were not perfectly drained, some fluid still remaining in the posterior cornua. This suggests the point brought out by King, that the only proper way of draining the ventricles is by tapping them posterorily.

The increase in the skull did not commence until about three months before the child was first presented to the speaker. The disturbance in the sight and gait were not perceptible in September; althought carefully examined, no evidence of disturbance was found, except the pain and nausea. The gait and sight became impaired after Christmas, after the attack of measles. When seeh in January the child could walk only with difficulty and then showed a tendency to fall to the right side. Just before operation this difficulty had markedly increased, support was necessary, and in spite of this the inclination to fall existed.

Dr. Gregory asked Dr. Carson how he would have succeeded in tapping from the spine.

Dr. Carson did not think that he would have succeeded in draining from the spine in this case, as the tumor was pressing upon that region.

Dr. F. R. Fry said there can be no question as to the presence of the sounds described, or as to their character. They were present at the first examination and augmented at the second. At the operation the brain bulged through the small opening made into the skull, and there was no recess between the cranial vault and the dura. At the post-mortem examination the sounds were still there, notwithstanding there was a hole in the skull. Speaker considered them due to bone vibration, and to the fact that the bones were free at their sagittal junction. The bone was not only attenuated, but was much hardened, a condition which was demonstrated in drilling at the post-mortem. Also, after the calvarium was removed, it sprang out at the edges, and it was very hard to get back into shape; it had to be wired.

As to the part played by the dilatation of the ventricles, referred to by Dr. Mudd, that had been inquired into very particularly by the speaker. He learned from the parents that the child's head had been abnormally large ever since infancy, it was a bulging cranium. No matter what might be found out about the connection of the tumor with the ventricular cavity, the ventricles had been dilated for a long time. The only localizing symptoms were those referring to the cerebellum or to the corpora quadrigemine—for good authorities have asserted that the symptoms that refer to involvement of the cerebellum may be simulated, if not imitated exactly, by disturbance of the corpora quadrigemine. A small tumor might occlude the Sylvian duct, and produce all the symptoms that a larger tumor might produce. Furthermore, there was no evidence of pressure between the cerebral axis; that is, there were no material or bilateral symptoms. There was no exaggerated knee jerk, or symptoms referable to pressure upon the fourth ventricle, as we would be apt to find in the presence of a large tumor in the cerebrum.

Dr. Carson omitted to mention that he had a perfect precedent for his operation, in a well reported case from Dr. Klein, of Philadelphia. He suspected a tumor from the symptoms, but first tapped the general

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ventricular cavity to relieve the pressure; but with no result. He afterwards trephined but did not find a tumor. The tapping was unsuccessful because the fluid was of such consistency as not to be recognized from the other structures.

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Dr. A. H. Ohmann Dumesnil presented a specimen of "Ainham," or "Ainhum," which means "saw," and is of very rare occurrence in this country. It was first described by DaSilva, of Lima, who observed it in his neighborhood. It is found in India, the West Indies, the most southern part of the United States, in South America and in Madagascar. It occurs most frequently in dark-colored persons, is of greater frequency in adult life than in youth, and attacks the male oftener than the female.

It is one of the symptoms which is found in leprosy, and is confined, as a rule, to the toes. It is essentially a neurotic trouble, an atrophy neurosis according to Eyles, which is probably the reason why it is found in leprosy nervosa.

The histological condition is that of an atrophy of the deep cutaneous and subcutaneous structures, as well as of the bone, whilst there is an hypertrophy of the superficial cutaneous structures; and in advanced cases we find a rarifying osteitis. In the beginning it looks like if a string had been tied around the member, causing a constriction. This constriction is progressive, and in about six or eight years there occurs a spontaneous amputation. It usually occurs at the metatarso-phalangeal fold, but the case presented is between the first and second phalanx.

Speaker also presented a specimen of "Fetus Papyraceus," which had occurred in the practice of Dr. Pezolt. Like all other cases of this kind it is a twin. The mother aborted at five months and recovered very nicely. However, within about two weeks a rather profuse hemorrhage occurred and the exhibition of ergot was followed by the expulsion of the fetus, the hands and legs of which are flattened like paper. The woman made a good recovery.

Dr. Hitt had seen a number of cases of "ainham" while in India. We are told to look for leprosy whenever we meet this trouble, but he had seen cases where several toes had been amputated and recovery followed without further trouble. One case was noticed by him in particular, about a year ago, where a man had cut off both small toes with a hatchet, because they became attacked with ainham and bothered him a great deal. He had no further trouble.

The end of the toe often enlarges, although this feature of the trouble is lacking in the specimen presented. As the constricting band tightens the end of the toe increases and looks something like a small Irish potato. Some cases are on record where the patient has recovered after the band was cut in the earlier stages.

Speaker said that very little is known of the pathology. Even in India, where a great many cases occur, they acknowledge that they know very little about it.

Dr. Ohmann Dumesnil said that it is a mistake to say that nothing is known of the pathology. The fact that nothing is known about in in India does not prove that it is unknown to us. Eyles has written very thoroughly upon the subject, and made microscopic examinations in over one hundred cases. Some new ideas are expressed by Unna, in his work on the pathology of skin disease, published in 1894. So far as the cause of the disease is concerned, that is a different matter.

Speaker said he would examine his specimen microscopically and see whether his results agree with the observations of others.

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Stated Meeting, Saturday Evening, March 23, 1895; the President, F. D. Mooney, M.D., in the Chair.

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Dr. H. W. Loeb presented a patient with a "Fistula" in connection with the "Nasal Duct," and demonstrated the "Trans-Illumination Test" in antral diseases.

The patient had been referred to him by Dr. H. C. Dalton about eight months ago, and had at that time been troubled for one year with a swelling of the right side of the face, just over the antrum. During that year the swelling had been persistent and had gradually increased. Three months before patient presented herself, some nodular growths of considerable firmness had appeared under the eye, the eyes teared, and the nose became occluded. An examination by an oculist failed to reveal any abnormality in the eye. The case presented all the features of a sarcomatous growth which had been spreading from the antrum. The trans illumination test, made with an incandescent electric light, revealed a normal transparency of the antrum on either side. If a tumor had existed in the antrum and had occluded it, or if the cavity had been filled with fluid, the abnormality would have been indicated by opacity upon the affected side. The test employed excluded the possibility of antral occlusion.

Four or five days after this demonstration an examination of the mouth revealed a small ulcerated patch over the alveolus of the affected side. An examination with a probe resulted in that instrument entering the cavity as high as the inner canthus. This was followed by immediate improvement, and all symptoms had disappeared three weeks later. Several oculists succeeded subsequently in introducing the probe, and another instrument introduced through the canaliculus came in contact with the first probe, thus demonstrating the connection of the fistula with the nasal duct.

The question arises, What is the cause of the occurrence of a fistula in this region? It had never suppurated, never poured out pus and had never been treated.

The test should be employed in every case of suspected antral disease, and, while not absolute, it is quite confirmatory.

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Dr. T. E. Murrell presented a patient who had come to him a few days ago with, what was diagnosticated, a gumma of the ciliary body of the right eye, on

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the nasal side of the cornea. There was suffusion of the iris with purulent matter, the pupil was occluded, the ulcerative process had involved the sclera and exposed the vitrans humor and the ciliary body. The swelling over the nasal portion of the ciliary body was quite a prominent dark ridge.

While gumma of the iris quite frequently met with, we rarely find it involving the ciliary body, and still more rarely leading to such extensive ulceration.

It looked as if the eye would be rapidly destroyed, but washing with bichloride solution and the application of forty grains nitrate of silver solution checked the ulceration, and it is gradually healing up. The eye is practically lost, there being only a bare perception of light. The history of syphilis is clear and the characteristic eruption had involved the entire body. The patient is under anti-syphilitic treatment.

It cannot be determined what to do with the eye until the course of the trouble is more defined, when it will be decided whether to enucleate or not.

ABSTRACTS

MEDICINE.

Piperazina and Other Eliminants in the Treatment of Gout.—In the *Practitioner* Mapother states that nearly two years ago the writer learned from the late Sir A. Clark that piperazina was a potent solvent of the urates, and he has since used it with excellent results. It is strongly alkaline, and therefore deserves the termination *ina* to mark that character. The most recent and very able researches as to the drug are those of Dr. John Gordon, of Aberdeen (*British Medical Journal*, June 16, 1894), who estimated its solvent power on crushed uric calculi as compared with that of other substances. The crushing gave an increased surface for solution, and a friend of the author's repeated some of the experiments with small whole stones, hoping that such might be acted on within the bladder, without obtaining satisfactory evidence. But it is likely that a coating of some other urinary deposit excluded the piperazina. Given internally, some of this substance reaches the bladder unaltered, and there may dissolve the uric gravels. The profession will anxiously await Dr. Gordon's paper, in which he is to report chinical observations. Mapother has had but few opportunities of using the drug in acute gout, which, with improved hygienic and regimenal habits, is becoming less frequent, while varied manifestations of the uric diathesis arise or are discovered in greater number. In regulating intermittent pulse, clearing habitually turbid urine, relieving sick headache and depression and pricking joint pains, its effects are apparent.

The following instance is given as illustrative of the above: A child, aged nine, of very gouty parents, suffered one attack of acute and two of subacute rheumatism, and then developed intermittent paraplegia. Regarding the diathesis as one merely modified by age, piperazina was largely given, and the paralysis twice suddenly disappeared

The dose should range progressively from 5 to 10 grains thrice daily. No untoward effect has ever appeared, even after twenty-grain doses occasionally given. A small dose nightly for some weeks is a reliable prophylactic. There is no advantage in prescribing it in effervescing waters, which may contain lime-salts. For the present its high price (twelve shillings an ounce) makes it scarcely attainable for public practice. It bids fair to supplant lithia, potassium, and salicylate of sodium as solvents and eliminants of the urates.

An occasional dose of blue pill does manifest good by increasing biliary excretion and lessening the storage of urates in the liver and spleen. It has been said that mercury may form an insoluble urate, but having extensively used that drug for syphilis and psoriasis, he never saw any arthritic symptom produced by it. In passing, it may be noted that while adult and aged patients with the oozing post-vesicular form of eczema are always of the uric diathesis, there is no connection between that condition and psoriasis. If the time-honored custom of taking a saline the morning after the blue pill is to be followed, any of the natural purging waters are suitable. The Villacabras water is very popular in Spain, where it rises, and in the United States. It gives satisfaction in gout cases, especially as regards the non-production of subsequent constipation.

For the alleviation and prevention of chronic gout there is no agent so easy and so efficient as the copious drinking of pure water, especially between meals. For the first eight years of his service in St. Vincent's Hospital, Dublin, gouty affections were so frequently seen, the city water supply being very calcareous and most scanty; whereas from 1867, with the Vartry water, the total solids of which are only four grains per gallon, and which is supplied most abundantly, such cases gradually and greatly lessened. In the Royal Hospital for Incurables, where he was concerned in the admission of patients, the same was apparent. The status of the disease was, however, made less evident by the habitual stimulant of the humbler people having changed from whisky to porter; and it is evident that, among two classes of the employed who drink the latter liquor freely, gout is extremely common.

The peasants of the western half of Ireland suffer largely from chronic rheumatic arthritis, due probably to the small amount of sodium chloride and alkaline carbonates in the farinaceous food they mainly rely on, and the great quantity of lime in the well water which they drink. Thus may be accounted for the eburnation of the articular surfaces and the bony growths round

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the joints. It is possible that as age advances the lime may displace sodium deposit earlier. Similar conditions have led to exostoses in horses. The cold, damp climate and neglected ablution check perspiration and direct the water to the kidneys, and thus may be explained the rareness of calculous disease among those people. The natives of India use a very similar class of food and water, yet in some districts stone is surprisingly common. Free perspiration and muscular inactivity may go some length in explaining the proclivity, but as the natives of other districts living on similar diet are free from the disease, some meteorological or geological factors not yet ascertained must be present. The tax on salt which held for half a century in Great Britain increased calculous diseases, and is still operative in India. This essential element of food acts both by chemical powers and by exciting thirst for water. That February is the month in which most gouty attacks arise is owing to the preceding cold, which checks perspiration and thirst, and thus the urates are allowed to store up.

The drinking of water at about 130°F., a habit copied from Wiesbaden, has come much into vogue, and has been advised at bedtime to prevent insomnia. An hour before retiring is a more suitable time, so that rest shall not be broken by the need for micturition; while the heat of bed would draw off the water by the skin, instead of allowing it to flush the urinary organs, by which the good is done. The sleep of gouty persons is often disturbed by light and noises, and a simple expedient is frequently effectual; if the edge of the pillow be placed under the occiput, it folds over the ears and eyes and completely shield them. The patient must sleep lying on the back, which is the most natural posture. In places where a public supply of soft water is not to be had, distilled water now sold under various trade names is very useful, as is also rain-water boiled and filtered. When distilled water is charged with carbonic acid, that gas may render the mass of food in the stomach spongy, just as it does the baker's dough. A notable result of the drinking of pure water is the lessened frequency of micturition among the gouty.

A belief is growing that the best health resorts for the gouty are those in which the waters contain the least solids, with the exception of those wherein sodium chloride abounds. Wiesbaden and Kissingen contain respectively fifty-two and sity-two grains to the pint, and the action is either the solution of the urates or, as Sir W. Roberts believes, the prevention of the change in the quadurates to biurates. The immunity of sailors from uric diseases is attributed to the quantity of common salt in their food. The action of sulphur waters is not fully understood, although their usefulness has been recognized for centuries. It may be mentioned that that of Lucan, eight miles from Dublin, has been made most availiable by the erection of a large hotel, in which the water may be drunk or used for baths. When bottled, it remains unchanged for many months. The climate of the place is so mild that it is an excellent winter resort. If people could be induced to drink six or eight tumblerfuls of pure water daily at home, the only advantages of new and foreign residence would be the climatic, scenic, and social changes, which are, however, pleasures by no means to be despised.

Of alcoholic liquors, unsweetened gin is by far the most admissible and champagne the least so. How delightful it would be if the producers of this wine would exclude as much as possible the acidifying or unfermented matters! The prostate and anus, which have a common vascular and nervous supply, are often highly irritated by the taking of even a glass or two. As to beers, we have the unassailable testimony of Sydenham that "London small-beer, hop'd or unhop'd," is useful, and the writer has never found Bass' India draught pale ale, taken in small quantities at meals, disagree. In many places it is difficult to procure it at retail, inferior stuffs being substituted, and waiters habitually spoiling it by pouring it from a height, thereby dislodging carbonic acid and making a mere froth of air. This drink is laxative, while the contrary is to be said of other ales and porters, especially if bottled, owing to their acidifying matters. An occasional fast from alcohol and from varieties of highly nitrogenized solid foods is often serviceable, for man's diet has become more and more complex and more unlike the unvarying meals of other animals.

Fresh fruits appear to aid in the excretion of the urates, as their salts alkalize and increase the urine and their vegetable acids stimulate the salivary glands. Their peculiar sugar is readily absorbed, whereas cane-sugar is injurious, much of it not being acted on till it reaches the small intestine, where it meets with invertin. During the last century honey was a usual sweetener. In 1700 the quantity of cane-sugar consumed in Great Britain was ten thousand tons, now it is a million and a half. A dietetic error—that of depending on a late dinner as the principal meal of the day—has been lately amended a good deal, many persons taking most of their animal food soon after mid-day. The habit in other classes of taking tea with their chief meal is highly causative of dyspepsia, largely because of the effect of tannin in checking the salivary flow. Frequent small meals are clearly advisable for the gouty, as thereby the urine is kept alkaline for a great part of the twenty-four hours, giving eight hours' work a day at least for the kidneys under this chemical condition.

The daily sponge bath, preferably at 82° F. (the Buxton water temperature, on which much of its efficacy depends), is distinctly preventive of gout, especially if followed by rough friction. Of course the latter is to be avoided over places where eczema exists or has existed. The Turkish bath is also advisable in many cases, and shampooing may remove the uratic stasis in the lymphatics, and may partially break down tophi and lead to their absorption. Of crippling gout, the writer has sent some cases to Bath, and forcible extension seems to have been the most potent curative measure. The habits there are unequaled in arrangement. Lastly,

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well-regulated exercise is all important, as one fact will make evident: in a gouty subject of hemiplegia, uratic deposit is abundant in the powerless leg, while often absent in its fellow. Inactivity during a long sea voyage, combined with the usual full living, often provokes gouty symptoms; but the sea-sickness must rid the digestive organs of urates, and hence the improved health which frequently results, and the malaise which follows if there has been no emesis.

Bacteriological Diagnosis of Diphtheria.—The following are the conclusions concerning the bacteriological diagnosis of diphtheria based on the recent investigations made by Drs. Hermann Biggs, W. H. Park and Alfred L. Beebe under the direction of the Health Department of the City of New York and officially reported to that body:

"1. All inflammation of the mucous membrane due to the diphtheria bacillus of Loeffler should be included under the name 'diphtheria,' and in this report they have been so included. An acute hyperemia of the mucous membrane caused by the Loeffler bacilli is considered as truly diphtheria as an inflammation with pseudo-membrane or exudate, and a case in which the lesions are confined to the larynx or bronchi as truly diphtheria as one in which the tonsils and pharynx are involved.

"2. Under pseudo-diphtheria should be included all inflammations of the mucous membranes which simulate true diphtheria and which are due to streptococci, or, more rarely, other cocci.

"3. The name croup or membranous croup should be regarded as a term merely indicating that the location of the pseudo-membranous or exudative lesion is in the larynx, and not as describing the nature of the disease whether diphtheritic or pseudo-diphtheritic. In New York City at the present time, 80 per cent of the cases of 'croup' are diphtheria.

"4. The examination of cultures made upon solidified blood-serum under the conditions insisted on by the Department form a reliable method of determining whether the diphtheria bacillus is present or absent in a throat. For diagnostic purposes, cultures should be made before the pseudo-membrane or exudate begins to disappear.

"5. Virulent diphtheria bacilli were apparently in about 1 per cent of the healthy throats in New York City at the time of these examinations. Diphtheria, however, was rather prevalent in the city at this time. Most of the persons in whose throats they exist have been in direct contact with cases of diphtheria. Very many of those whose throats contain the virulent bacilli never develop diphtheria. We must therefore conclude that the members of a household in which a case of diphtheria exists should be regarded as sources of danger, unless cultures from their throats show the absence of diphtheria bacilli.

"6. The bacilli found in the original serum cultures, which in appearance and staining are identical with the typical Loeffler diphtheria bacillus, may be regarded, for diagnostic purposes, as virulent diphtheria bacilli, if the cultures have been made either from throats containing exudate or from those of persons who have been in contact with true diphtheria, for investigation has shown that over 95 per cent of such bacilli are virulent.

"7. All bacilli which are identical with the virulent Loeffler diphtheria bacillus, morphologically, biologically, and in staining by reagents, should be classed with the diphtheria bacilli, whether they have much, little, or no virulence when tested in guinea-pigs. Bacilli which have entirely lost their virulence rarely, if ever, regain it. They probably are incapable of causing diphtheria, for the twenty-four cases in which they were found by us never developed any lesions, nor were they the origin of any case of diphtheria, so far as could be ascertained.

"8. The name pseudo diphtheria bacillus should be regarded as applying to those bacilli found in the throat which, though resembling the diphtheria bacilli in many respects, yet differ constantly from them. These bacilli are rather short and are more uniform in size and shape than the Loeffler bacillus. They stain, as a rule, equally throughout with the alkaline methyl blue solution and produce alkali in their growth in bouillon. They are found in about one per cent of the healthy throats in New York City, and seem to have no connection with diphtheria. They are never virulent.

"9. One or more varieties, both of streptococci and other forms of cocci, exist in the great majority, and possibly in all, of the healthy throats in New York City. Cultures from the throats in cases of pseudo diphtheria contain more cocci, especially more streptococci, than those from healthy throats, but otherwise do not seem to differ.

"10. The investigations of the Health Department have given striking evidence of the marked difference in mortality between true and pseudo diphtheria, for while it was 27 per cent in diphtheria, it was under 2 per cent in pseudo-diphtheria.

"11. The combined clinical and bacteriological investigation of over five thousand cases has demonstrated clearly the fact that many of the less characteristic cases of diphtheria and pseudo diphtheria are so similar in appearance, symptoms and duration that it is impossible to separate them, except by bacteriological examinations. In the more severe cases and after the disease has fully developed, cultures are less necessary, although their systematic use is desirable.

"12. Persons who have suffered from diphtheria should be kept isolated until cultures prove the bacilli have disappeared from the throat, for not only are the bacilli which persist in the throat virulent, but they are not infrequently the cause of diphtheria in others. Where cultures can not be made, isolation should be continued for at least three weeks after the disappearance of the membrane, for our experience has shown

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that it is not unusual for the bacilli to persist this length of time.

"13. In pharyngeal cases in which thorough irrigation of the nostrils and throat with 1 to 4,000 bichloride of mercury solution has been practiced every few hours, the bacilli have not remained in the throat for as long a time after the complete disappearance of the pseudo membrane as when no antiseptic has been employed. Other cleansing and antiseptic solutions are also useful.

"14. Inflammations of the mucous membranes due to streptococci, either alone or associated with other cocci, are usually mild in character. These inflammations may be more serious when the lesions are located in the larynx, or when they are complicated by scarlet fever or measles.

"15 While the streptococci and perhaps other forms of cocci may be considered as the primary etiological factor in pseudo-diphtheria, yet, in the majority of cases at least, certain predisposing factors, such as exposure to cold or other deleterious influences or the presence of certain infectious diseases, appear to be of great importance in determining the occurrence of the disease.

"The streptococci which under these conditions apparently cause the disease are probably those which had for a long time existed in the throat, and not those freshly derived through communication with other cases of pseudo-diphtheria. In a small number of cases, indeed, the histories suggest a direct communication, but the causation may be equally well explained by the sup position that the second case shared with the original one the same predisposing cause.

"16. The slight mortality and the usual mildness of the cases of pseudo-diphtheria do not warrant us in enforcing isolation, even if further investigation produced positive proof that this disease is directly communicable.

"With the results of these investigations before us, we can appreciate the difficulty of exterminating diphtheria from a city like New York. On the one hand, we have cases of diphtheria scattered all through the city, many of which are so mild as to be unrecognized, and, on the other hand, we have the crowded tenements with their ignorant and shifting population, where proper isolation of the patient from other members of the family, or of the family from other inmates of the building, is usually impossible unless harsher measures are adopted than are now customary. With stricter isolation of patients and intelligent and systematic supervision of the schools and tenements, we can certainly reduce the number of cases of diphtheria in the city, but the total extermination of the disease under the existing conditions of life here does not seem probable unless we can acquire new means to combat the disease."—*Med. Record.*

Angina Pectoris of Gastric Origin.—In addition to true angina pectoris, due to sclerosis of the coronary arteries of the heart and of the aorta, cases of sthenocardia of toxic (tobacco), infective, nervous (hysteria), and reflex origin also occur. Although dyspeptic conditions have ere this been mentioned as liable to cause or favor paroxysms of reflex sthenocardia, the existence of angina pectoris of genuine gastric origin does not appear to have been hitherto proved, in spite of the fact that, according to Dr. G., it is the most frequent form of angina pectoris not due to sclerosis of the cardiac vessels.

The first case of angina pectoris of gastric origin, which came under the author's notice, was remarkably conclusive, the patient being free from arteriosclerosis, but suffering from chronic constipation and dyspeptic disorders. He presented paroxysms of sthenocardia, extremely intense, and accompanied by inflation of the gastric region, all of which symptoms disappeared as if by magic the moment vomiting took place, either spontaneous or induced by titillation of the throat.

Since then Dr. G. has had occasion to note eight other typical cases of this affection, and to study its symptomatology and treatment.

In the form of angina pectoris in question, the paroxysms may supervene at any time, but, as a rule, they occur toward evening, after a hearty meal. They are usually preceded by a sensation of weight in the epigastric region, eructations and nausea. Mental excitement and physical effort may also determine an attack, but in such cases it will always be found that digestive troubles are at the bottom.

Paroxysms of angina pectoris of gastric origin resemble in every respect those of true sternalgia. The pain is localized in the lower half of the sternum, whence it radiates into the left shoulder and arm. Sometimes it even involves the fingers, left hand of the neck, and the interscapular region. Like true angina pectoris, an attack of sthenocardia of gastric origin may end in death at the time the pain is at its height, as in one case in the author's experience.

Among the nine patients observed, seven were men, and two women, one of the latter being 70 years of age. The age of the other patients varied between 39 and 49 years.

The objective symptoms consisted sometimes of chronic pharyngitis, at other times slight bronchitis, emphysema, or enlargement of the liver; but there were invariably extreme tenderness in the epigastric hollow and swelling of this region, accompanied by a torpid condition of the digestive functions and chronic constipation. Only a few of the patients presented a slight degree of arteriosclerosis, but the woman who was 70 years of age was distinctly atheromatous. Others presented signs of arthritism (pain in the joints and gravel in the urine), but there was not one who was manifestly gouty. Four of the patients had had syphilis, but without any trace being left of the disease. Lastly, none were addicted to the intemperate use of alcohol or tobacco.

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The therapeusis of angina pectoris of gastric origin

includes treatments of the attack and treatment in the intervals between the paroxysms.

The best means of combating an attack of sternalgia of gastric origin is said by Dr. G. to be the induction of vomiting, after previously administering a stimulant consisting either of a sufficient dose of good wine or a strong alcoholic beverage; or else to wash out the stomach thoroughly.

In the interval between the attacks the patient should be put on a suitable diet, and an antidyspeptic treatment should be instituted, in which intestinal antiseptics (salol and powdered charcoal), evacuating enemata, irrigations of the stomach, massage, and faradization of the abdomen play the principal part. In addition, Dr. G. gives potassium iodide internally in progressively increasing doses, which may reach 4 or 6 grammes (1 to 1½ drs.) daily.

Irrigations of the stomach are also an excellent means of aborting imminent paroxysms of angina pectoris, if resorted to during the prodromal stage of the attack—characterized by nausea and a feeling of oppression in the chest.—Dr. S. S. Grouzdew in *Med. Week; Amer. Med.-Surg. Bull.*

Treatment of Gouty Heart.—The author contributes an exhaustive paper on the subject of gouty heart, from which we extract the following pertaining to treatment:

Some of the best results in the treatment of gouty heart have been obtained from the use of recognized mineral waters; but baths and waters call for the greatest care in the selection of them, and for even greater caution, is possible, in the use of them. Without judgment on the part of the doctor at home and the doctor abroad, such a patient, especially if over 50, may be very easily pulled to pieces.

The diet should be spare in amount, and of an ordinary mixed kind. We have to remember, when dealing with the gouty heart, that this great nervo muscular organ is often nourished insufficiently, as well as poisoned. It is good to order a fair amount of water to be drunk at each meal; and Vichy water is, perhaps, the best beverage of all. In many instances, a small, definite quantity of stimulants—such as whisky, or a pure red wine—has to be allowed at meal times; but all white wines and beer must be strictly forbidden. The question of smoking must never be forgotten. To insure the best and speediest results, tobacco in every form is best avoided entirely. Some patients plead for one pipe a day; but I have known even the last pipe to have to be given up by the gouty old man with a weak heart before cardiac distress disappeared.

Drugs are valuable, if properly selected; useless or worse than useless, if prescribed in a routine fashion from the list of cardiac tonics. If we wish to know what class of medicines does most good in gouty heart, we have but to ask the sufferer after an experience of a year or two. It is remarkable how many of these patients suggest blue pill, or tell us spontaneously that they have found it better than all the other remedies prescribed for them; other patients praise saline purgatives. Plummer's pill, taken every second night for a fortnight, is highly successful.

Next to purgatives, the drugs that give most satisfaction are potassium iodide, arsenic, strychnine and digitalis, with its allies. If pain be a prominent feature, iodide should be ordered, in combination with alkalies; if faintness, strychnine, variously combined. Arsenic and strychnine make a valuable combination in some instances. The use of digitalis demands judgment. Prevalent views about vasomotor angina might at first sight suggest the opposite class of remedies—those which lower blood-pressure very readily and very rapidly, particularly the nitrites and nitroglycerin. But we must not forget that the sufferer from gouty heart has no such pulse habitually, no such evidence of cardiac vigor as we associate with high tension and as we typically find in some cases of chronic Bright's disease; and that if the tension do suddenly rise to a dangerous height during the angina, such a paroxysm may be safely regarded as a phenomenon of weakness, not of genuine strength, of the vasomotor system. The poor pulse and the signs of large, feeble heart rather suggest cardiovascular tonics. It will be well, therefore, as a rule, to order, say, five minims of tincture of digitalis, to be taken with each dose of any of the preceding drugs or combinations that are given. In some of these patients, strophanthus occasionally proves peculiarly suitable as a substitute for the older drug.

During the anginal seizures we naturally trust to the nitrites and nitroglycerin, which are so powerful and so swift in their action. In more prolonged instances, good results are had with a hypodermic injection, consisting of two minims of the B. P. injection of morphine and two minims of the solution of strychnine hydrochlorate—that is, 1–5 and 1–50 of a grain, respectively, of the two drugs. The effect of this combination on a disabled heart is often extremely satisfactory.

Whilst a single dose of morphine given by the physician himself is recommended in the acute phase of the gouty heart, it is urged to discountenance the use of sedatives—particularly hypnotics—for which the sufferer often craves or has actually acquired a habit. Sulphonal has lately replaced chloral hydrate in considerable measure as the popular remedy for sleeplessness. Such drugs do endless mischief in the insomnia of irregular gout if indiscriminately used.—Dr. J. Mitchell Bruce in *The Practitioner; Amer. Med.-Surg. Bull.*

Differential Diagnosis between Pulmonary Syphilis and Pulmonary Tuberculosis.—Dr. Reodu, at a recent clinical lecture, presented an old woman who had for a long time been emaciated and cachectic, but without fever (*Brit. Med. Jour.*). The symptoms were ill-defined: some pain, stiffness of the limbs, without marked weakness or paresthesiæ, dyspnea on exertion, and for a short time a dry cough without expectoration. The respiratory and auscultatory phe-

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nomena were found normal anteriorly, but behind there was dulness over the right apex, with roughened, prolonged expiration. There was a loud, rough, systolic murmur, together with a softer and more superficial one, but no symptom of cardiac insufficiency. The arteries were apparently healthy, the liver normal in size, and there was no albuminuria. There was a diffuse and characteristic syphilitic melanodermia, and iritis of two years' standing, nocturnal bone pains, and headache. Her only previous illness had been measles. It was pointed out that against tuberculosis was (1) the long duration, (2) the absence of expectoration, of rales, and of concomitant symptoms. Syphilis does not usually attack the apices, although cases of this occurrence are recorded. Syphilis and tuberculosis may occur in association, and tuberculosis may attack a lung previously syphilitic. From the absence of a history of acute pneumonia an indurating pneumonia could here be excluded. The attack of measles was not considered an adequate cause. As there were no other etiological factors, the changes in the heart and lungs were probably syphilitic. Great improvement followed the exhibition of mercury and iodide of potassium.—*Medical Record.*

Report of a Case of Anemia.—By Oliver P. Barber, M.D., Saginaw, West Side, Michigan, Gynecologist to Saginaw General Infirmary; Surgeon to Michigan Central Railroad; President of the United States Pension Board of Medical Examiners, Etc. The following case of anemia in a patient of inherited tuberculous diathesis yielded so rapidly to a form of treatment which was practically new to me that I feel justified in reporting it for the benefit of those practitioners who have not yet made the experiment:

Miss A. B., aged 18 years; attending high-school; father died of phthisis pulmonalis shortly before her birth. The case came under my charge September 15, last, in an aggravated anemic condition, characterized by suppression of the menses, grave intestinal disturbance, tympanitic and prospective phthisis abdominalis. In addition to gastric catarrh, she had hacking cough, myalgic pains in the chest walls, an afternoon temperature of 102° to 104°, a rapid and weak pulse.

She had been confined to her bed for several weeks before I was called in. For two weeks I used the treatment usually prescribed in such cases, but without satisfactory results, and I had little hope for her recovery. As a dernier resort, I sent her by way of experiment a sample bottle of Wine of Cod Liver Oil (Stearns') with instructions to follow the directions given on the label. A decided improvement was manifested within a few days. Her appetite improved, assimilation of food became normal, the gastric catarrh disappeared, color returned to her cheeks and her weight increased. I had no previous experience with the Wind of Cod Liver Oil, but as no other medicine was administered in this case, it must be credited with the remarkable results attained. The condition of the digestive functions was such that no embolism or other ordinary preparation of the oil could have been administered.

SURGERY.

Examination of Internal Organs.—Dr. Bendersky discusses his method of auscultatory percussion as applied to determine the limits of the thoracic and abdominal organs. He says that in respect to the stomach it gives the best results. A soft stethoscope is placed over the organ to be examined. When the lower limit of the stomach is reached, the percussion note is either but faintly or not at all heard. Lower the note of the colon can be made out, and it is said that it is possible to ascertain the width of the transverse colon, and thus to recognize when it is dilated. The upper limit of the stomach can only be relatively determined. In some cases the boundaries found for the liver and spleen have been ascertained to be correct after death. Fluid in the abdomen has been found to extend one and a half to two fingers' breadth higher than was indicated by ordinary percussion, and in the same way the cardiac dulness has been made out to be larger. Renal percussion may also thus give more accurate results. The author concludes that the boundaries, especially of the abdominal organs, and particularly of the stomach and parts of the intestine, can thus be satisfactorily ascertained. The method is specially useful if the observer be slightly deaf. The number of cases in which gastric dilatation has been incorrectly diagnosed will be diminished by this method of examination. The author describes and figures a collective stethoscope capable of being used by a number of observers at the same time.—*Wiener Med. Woch.; Med. Record.*

Diagnosis of Pyloric Tumors.—Dr. Rosenheim refers to the restoration of the motor (but not chemical) functions of the stomach after pylorectomy, and he illustrates it from two cases operated on by Hahn three and a half years and three months ago respectively (*Brit. Med. Jour.*). In the diagnosis the symptoms due to pyloric obstruction are noted. Rare tumors not directly at the orifice may cause obstruction by spasm. Palpation will decide the position. The tumor may be displaced to the right, more often to the right and downward, but sometimes to the right and upward. The author quotes another of his cases in which Hahn found an hour-glass contraction due to malignant disease. Gastro enterostomy was performed. The author then discusses at some length the question of adhesions to the liver and pancreas as shown by the movement of the tumor. This is obviously a most important matter in the question of operative treatment. Tumors of the stomach, intestine, and omentum can often be prevented from ascending during expiration if they are fixed with the hand at the height of inspira-

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tion. The author, however, cites a case in which this movement could not be arrested, and yet at the operation by Hahn no adhesions to the liver were found. There were adhesions to the pancreas, and gastro-jejunostomy was performed. If the movement of the tumor upward is very free, the latter may disappear behind the liver edge. Examination should be made in the knee-elbow position. Pyloric tumors move to some extent with the liver when they have been developed in a normally placed organ. They can be more readily diagnosed in women, in whom displacement of the stomach occurs more frequently. Often the presence of a tumor is not necessary for diagnosis. In one case a tumor could not be felt even under the anesthetic, yet a malignant ulcerating surface the size of a two-mark piece was found at the operation. The patitnt died of hemorrhage from a stitch hole in the stomach. The author thinks that, although palliative treatment can improve the condition of the patient, yet in future operative treatment will be the chief one in the majority of these cases.—*Med. Record.*

Suggestions on the Use of the Murphy Button.—Dr. John B. Murphy reports 100 cases in which this device was employed and concludes as follows:

1. The cicatrix produced with the button does not contract.

2. Size No. 1 ($\frac{3}{4}$ inch or .02 m.), or No. 2 ($\frac{13}{16}$ inch or .022 m.) should be used for cholecyst-enterostomy. I prefer No. 2.

3. End-to end, side to-side and end-to-side of the small intestines should be made with button No. 3 ($\frac{15}{16}$ inch or .025 m. in diameter).

4. End-to end and side-to-side of large intestine should be made with button No. 4 (1 inch, or .026 m. in diameter).

5. A special large size (1$\frac{1}{4}$ inch or .029 m. in diameter) with a long male cylinder may be used in some cases of resection of the rectum with advantage, but it should not be used unless it fits loosely.

6. In intestinal obstruction resection with end to-end union gives better results than lateral approximation and should always be performed where practicable. The same operation should always be done in gangrenous hernia. In fecal fistula the bowels should be resected and united end to-end.

7. The patients should receive liquid nourishment as soon as the effect of the anesthetic passes off. The bowels should be made to move as soon as possible after the operation and frequent evacuations kept up.

8. If the button does not pass in three or four weeks the rectum should be examined, as it may rest just inside the sphincter.

9. There has been one case reported of occlusion of the button by fecal impaction in the cylinder. This can be easily avoided by mild cathartics immediately after operation.

10. When returning to the abdomen the intestines should be placed in parallel lines, especially at seat of approximation, to prevent sharp curves and obstructions. This occurred once with the button; many are reported following suture.

11. There is no danger from obstruction from the button, as not a single case has been reported. This proves that the deductions made by Chaput, of Paris, from experiments on the cavader are erroneous.

12. There is no danger of extension of the pressure atrophy beyond the line of pressure.

13. Primary adhesion may be hastened in malignant cases by abrading the peritoneum with a needle. It is unnecessary in non-malignant cases.

14. A supporting suture is never necessary to secure union and should only be used to relieve tension when the viscera approximated are forced out of position.

15. The mucous membrane should be pushed down in the cup of the button before closing it; if redundant it should be trimmed off with scissors. It should never be allowed to protrude between the edges of the button when the button is closed.—*Chicago Clin. Reporter.*

Gastroplication.—Under this name, Dr. Joseph Brand has recently described a new operative procedure for the treatment of gastric dilatation. Although devised as long ago as 1889, it was not until February of this year that he had an opportunity of putting it into practical execution. Gastric dilatation is usually due to some form of stenosis at the pyloric orifice, either resulting from new growths, cicatricial tissues, or adhesions, and the aim of surgical procedures has been the removal of the cause of the obstruction. Much has been accomplished in this direction by the exsection of the cicatricial tissue or by resection of the pylorus, and the surgeon can point with pride to the successful results obtained in many of these cases by operative means. There are some cases of gastrectasia, however, in which, after all medical treatment has been exhausted and laparotomy has been resorted to, none of the above lesions can be discovered, and the operator is obliged to close the abdomen without having made an effort to relieve the dilatation. It is for this class of patients that Dr. Brand recommends his operation, which has for its object the diminution of the size of the stomach by the formation of a fold and suture of its peritoneal and muscular layers. This procedure has been successfully performed in the case of a female patient suffering from extreme dilatation of the stomach, according to the following technique:

The abdomen was opened by an incision eight centimeters in length and parallel with the border of the ribs on the left side. The stomach was then sought for, eventrated by slow traction, and the pyloric region carefully examined. No tumor, cicatricial deposit or adhesions could be discovered at this place, but a distinct flexion had resulted in consequence of the sagging down of the greater curvature. The anterior stomach-wall was then folded inward and sutured in a transverse direction, and to the right and left of the transverse fold a

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longitudinal fold was formed in like manner. The same proceeding was carried out on the posterior gastric wall, which was rendered accessible by making several slits through the great omentum, through which the organ was drawn. It was found easy to lift the muscular and peritoneal layers from the mucous membrane, which could be felt as a thick seam. Over two hundred sutures of catgut and silk were inserted, and the stomach was then returned to the abdominal cavity. Aside from the wounding of an arterial twig of the arcus vasculosis during the insertion of sutures in the posterior gastric wall, no accidents were encountered during the operation, which was followed by a most rapid recovery.—*Inter. Jour. of Surg.*

NOTES AND ITEMS

A Statue to Lavoisier is to be erected in Paris. Many subscriptions in aid of its erection have been obtained from professors and students of German universities.—*Medical Record.*

A Newly Discovered Foramen.—Dr. J. W. Hartigan, Professor of Human and Comparative Anatomy in the West Virginia University (*N. Y. Med. Jour.*) informs us of his discovery of a foramen in the base of the transverse process of a lumbar vertebra in the human subject. This, he says, has never been noticed by any anatomist, so far as he is informed. Henle's case was one of union, by a bridge of bone, of the mamillary and accessory processes, an entirely different thing.

Modern Greek as an International Language.—In the "Register and Manual of Information," published by the New York County Medical Association, we are pleased to see a recommendation that Greek be adopted as the common language of science (*Med. Rec.*). It is suggested that the medical writers of this city officially endorse the proposition to adopt this most beautiful, most flexible, and most expressive of tongues as the means of inter-communication between scientists throughout the world.

Two Easy and Delicate Tests for Albumin in Urine.—Dr. C. Fouchlos (*Progres Medical*) recommends two new tests for albumin in urine, for which he claims utmost delicacy and absence of any possible fallacy:

1. Add to the suspected urine a few drops of a one per cent solution of corrosive sublimate; in case of turbidity, add some drops of acetic acid. If the turbidity persists it is due to the presence of albumin.

2. Take 100 cc. of a ten per cent solution of sulphocyanide of potassium, and mix with it 20 cc. of acetic acid. Add a few drops of this mixture to the urine. If albumin is present in small quantities, an immediate turbidity will ensue; if in larger quantities, a heavy white precipitate will appear.—*Med. and Surg. Rep.*

The British Medical Association and Medical Ethics.—The new section on Ethics, which will be inaugurated at the next annual meeting of the British Medical Association, will be one of the most important of the series to general practitioners. The section will be opened on Wednesday, July 31, by the President (Dr. W. F. Cleveland), who will deliver an Address on Ethics generally. The subjects concerning more particularly the relations of medical men with each other, which will be discussed on that day, are, (1) Intra Professional Etiquette; (2) Advertising, to be introduced by Dr. George Wm. Potter; and (3) Unqualified Assistants, to be introduced by Mr. George Brown. On the Thursday, The Ethics of Gratuitous and Cheap Contract Practice will be discussed. Two subjects, (1) Clubs, Medical Aid Societies, and Contract Practice, to be introduced by Dr. R. W. Doyne, and (2) Hospitals and Dispensaries, to be introduced by Dr. G. Henty. On the Friday the Section will continue the discussion of that which has not been completed on the two previous days, and selected papers will be read which do not come under the above heads.

Medical Societies and the Act to Regulate Trusts and Conspiracies Against Trade.—There is pending before the general assembly of Arkansas a bill which, if it passes, will prohibit the making of fee bills by medical societies. Article 8 of the Code of Ethics says:

"Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit."

Section 1 of the anti-trust act contains this language (italics ours):

"That hereafter it shall be unlawful for two or more persons, firms, corporations or *associations of persons*, either as a single corporation or otherwise, or for any two or more of them, to in any manner whatever, to combine capital, skill or acts, or to conspire in any way, to restrict, or in any manner interfere with the trade, or to combine capital, skill or acts for either, any or all of the following purposes:

* * * * *

"Fourth. To fix at any standard or figure whereby its price to the public shall be in any manner controlled *or established, any work, professional* or otherwise, or any article or commodity of merchandise, produce or commerce, intended for sale, use or consumption in this State.

"Fifth. To make or enter into or execute or carry out any contract, obligation or agreement of any kind, or description, by which they shall bind or have bound themselves not tos ell, dispose of or transport any article or commodity or article of trade, use, merchandise, com-

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merce or consumption below a common stand and figure, or by which they shall agree in any manner to keep the price of such article, commodity or transportation at a fixed or graduated figure, or by which they shall in any manner establish or settle the price of any article, commodity, labor, or transportation between them or themselves or others to preclude a free and unrestricted com petition among themselves or others in the sale or trans portation of any such article or commodity, or by which they shall agree to pool, combine or unite any interest they may have in connection with the sale or transportation of any such article or commodity that its price might in any manner be affected, or to create or carry out, either directly or indirectly, any agreement, combination or other scheme to *establish the price for services of ang person of whatsoever profession or calling.*"

The demagogism of the bill is made manifest in section 11, which says: "The provisions of this act shall not apply to agricultural products or live stock in the hands of the producer or raiser."

Of course the passage of such an act would not materially affect the fee bills of medical societies, which are almost universally "more honored in the breach than the observance."—*Journal of the Arkansas Medical Society.*

A Lay by a Layman.

Did you ever know a bill like a doctor's bill—
So easy to create and so difficult to kill?
Steady as the strokes from the hand of Fate,
Visit after visit doth the sum accumulate—
And the medico forgetteth not a solitary date.
Seldom doth he bring his bitter dope along,
But he gives the druggist orders to make it good and strong:
Something for the stomach, for the kidneys, lungs, and spleen,
With dynamite to touch them off, or nitro-glycereen;
"Aquæ fenículi, ext, hematox, campech.,"
And other Latin epithets to rattle in your neck;
"Inf. gentianæ, tint. card. co.,
Haust.!" What do you think of that to make the liver go?
And many a time I've read it, though I don't know what it's for;
"Syr. limon., potass. citratis, tinct. ferri perchlor."
It fetches fancy prices, but the druggist has to pay
For what this language cost him when he learned it by the day;
Besides, there is the bric-a-brac it takes to ornament
His little store; and worst of all, there is the awful rent.
But the medico comes, and silent as the day,
Without a word of settlement he takes himself away.
The story he is telling has many chapters more,
And we'll never reach "Finis" till we reach the golden shore.
Drop, drop, drop, like the rain upon the pane—
He always says "good-by," but he always comes again.
Here is how it goes—last week it happened twice
(I think we need Socrates to give us some advice).
"Baby's got the stomach ache! O dear me!
Telephone quick—seven hundred ninety three—
'Doctor! Doctor Blank! O, baby's got a fit!
Come this very minute! Whatever you're at, quit!'
Poor ittie baby! There! Doctor'll soon be tummin',
Zen he'll div oo ittie pills for naughty old abdomen!
Sh-h h!—there's a pet!—Go to seep! * * *
"Who's at the door?"—
"Doctor," says the maid.—"And what's the doctor for?"—
"Why, he says you called him up."—O—I—did, but that was quite
A little while ago—and I had such a fright.
My feelings are like soda—they foam, but do not keep:
Baby *did* cry, but now—he's fast asleep."
Of course there'll have to be a small prescription—that's all.
(Forty-five cents. Two dollars for the call).

If mamma has the toothache, papa the dumps;
Grandma the rheumatiz, or Tabby Tom the mumps,
No matter what the ache, or the pain, or malaise,
The first thing we see is the doctor in his chaise.
Then he has to come again to see how we're "getting on"—
And it all goes in the bill. So jogs the world along.

Every month we get a shock—chiefly on the second day—
For our doctor is a "regular" and always wants his pay.

That's the way it goes. If I were in his shoes,
I might be an optimist; now I have the blues,
For every dividend I draw, this doctor has to share—
"'Tis money makes the mare go," but *he* owns the mare.

—*Medical Age.*

Medical Association of Missouri.—The thirty-eighth annual session of the Medical Association of Missouri will be held in Hannibal, May, 21, 22, and 23, 1895. Titles of papers to be read must be sent to J. H. Duncan, Room 409, Union Trust Building, St. Louis, Mo., before May 1, 1895.

J. C. Mulhall,
A. L. Fulton,
J. H. Duncan,
Committee on Scientific Communications.

For delicate females and irritable children Zumo-Anana (Pine-Apple Digestsve Wine) is an excellent remedy.

Bridgewater, S. D., March 5, 1895.

Zumo Pharmacal Co., St. Louis.—

Gentlemen—Your sample of Zumo-Anana (Pine-Apple Digestive Wine) received some time ago; accept thanks. We have tested its value in a few cases and it as an A1 digestant, and a tonic very suitable especially for delicate females and irritable children. We consider there is a good field and wide range of usefulness for it.

Drs. D. A. Smith.

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Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXXI. ST. LOUIS, APRIL 27, 1895 NO. 17.

ORIGINAL ARTICLES

A Case of Primary Tuberculosis of the Female Breast.

BY L T. RIESMEYER, M D., ST. LOUIS.

Only a few years ago pathologists claimed that no tubercles occurred in the mammæ, and but a few well-authenticated cases have been reported. The latter are mentioned in a treatise written by Dr. Ludwig Piskacek of the Surgical University-Clinic of Vienna. Piskacek reports eight cases, which he had an opportunity to observe during the period of October 1, 1881 until the end of September, 1886, at Professor Albert's clinic, Vienna. There was not a single case of primary tuberculosis of the mammæ among them and in most of them existed tuberculosis of the lungs.

The case I wish to report is that of a colored woman, 27 years of age, who noticed enlargement of right mamma since her fourteenth year. Since September, 1887, the swelling became larger and painful which time coincides with the nursing of her first and only child. In March, 1888, patient presented herself at the St. Louis Polyclinic, when the breast at some places was very painful to the touch, hard and tense, at others fluctuating. The nipple on the affected side was slightly retracted and appeared about one-half the size of that of the healthy breast.

The whole breast was movable over the pectoral muscles. There were a number of hard nodular protuberances especially at the inferior and external margins. Several abscesses were opened and about six ounces of pus evacuated. Patient was placed under anti-syphilitic treatment—mercury and iodides—for about six to eight weeks, while the abscesses were thoroughly drained and cleansed with antiseptic solutions followed by the usual antiseptic dressings. Patient had a slightly elevated temperature throughout the treatment, was perfectly well otherwise. No deposits could be detected in the lungs.

On June 5 it was decided to amputate the whole breast, which was found to be studded throughout with tubercles, most of them in the stage of cheesy necrosis.

With the exception of one place the wound healed by first intention. The rest healed within about six to eight weeks after several curettings and applications of salicylic acid. Three years after the operation I saw the patient, who then appeared to be entirely well. She did not cough and presented no evidence of recurrence at the site of operation. In the axillary space, however, were a few enlarged lymphatic glands forming a lump the size of a small walnut, the removal of which I urgently advised. The child of the patient was also well. Also brothers and sisters have been well. Her mother died of carcinoma of the right mamma at the age of sixty.

As regards the differential diagnosis tuberculosis of the mamma may in the climacteric period be mistaken for carcinoma and at an earlier age for adenoma. After the tubercular foci begin to soften and break down, it may simulate a cystic sarcoma or a milk-cyst.

Piskacek describes a case of chronic suppurating mastitis, which was mistaken for tuberculosis; but after the breast was amputated no tubercles could be detected.

Of interest are the statistics of Professor Albert's clinic at Vienna, reported by Piscacek. Out of all patients treated at this clinic 0.07 per cent had mamma tuberculosis; of the women treated 0.18 per cent. As stated above there was not a single case of primary tuberculosis of the mammæ among them.

Having found no evidence of other tubercular foci in the patient, even years after the operation, I feel justified in calling the above case a primary tuberculosis, although the source of infection could not be determined.

A Case of Hour-Glass Contraction.

BY O. H. BUFORD, M.D., CARTERSVILLE, GA.

March 11, at 11 o'clock P.M., I was called to see Mrs. F., primipara, thirty-two years of age. I found head presentation, left occipito-anterior position. Body of child in the left hypochondriac region; pelvis roomy, with a good deal of adipose tissue; cervix not entirely obliterated; os patulous. I told the patient and family that the presentation was all right but did not expect the child to be born very soon.

Mrs. F. had been under treatment by my partner, Dr.

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J. G. Greene, for albuminuria, with swelling face, hands and lower extremities. Had been taking twelve drops of chloroform three times a day. Edema relieved, except in the feet. Labor continued through the night. On the morning of the 12th but little change; labor continuing through day and night.

March 13, cervix obliterated and dilated slightly. By evening os dilated to size of a silver quarter, edge thin, being thick, and patulous back. Pains continuing strong through the night, patient sleeping some.

March 14, os dilated about two inches in diameter, amniotic fluid passing away, uterine contractions weak. Patient and family being impatient, I called in Dr. Greene, who, after making examination, confirmed my diagnosis, and suggested giving fluid extract ipecac, one drop every thirty minutes, till pains became stronger, and left with promise to return in afternoon. By one o'clock, pains being good and os dilated sufficiently, I ruptured the membranes, and labor came on with strong bearing down pains, but almost no descent of the head. I pressed on the breech of the child as the contractions came on. Gave chloroform to relieve patient and relax the parts. The circular fibers of the uterus were the only ones brought into action causing a constriction above the pelvis. The longitudinal fibers did not contract. This continued for several hours, until I was worn out and patient becoming discouraged.

Dr. Greene having returned, we decided to give thirty drops of fluid extract ergot and repeat in one hour to stimulate the uterus to more uniform contractions. I instructed the patient to bear down with each pain. We lifted the child from the left hypochondrium to the center of abdomen as the uterine contractions came on.

The head slowly descended, face and head rotated to the hollow of the sacrum, occiput pressing on perineum. Owing to rigidity of perineum, delivery was delayed. As the face passed over the perineum it rotated to the left.

Right shoulder rotating in the hollow of sacrum presenting at the perineum on the left, under the pubic arch.

Right shoulder being delivered first, showing a complete change in position of the body after descent of head.

The child, a large female, was asphyxiated. By long and continued efforts it was resuscitated after there seemed to be no hope, showing that we should not become discouraged too soon in these cases. There was complete hour glass contraction on placenta, administered chloroform, introduced hand into uterus and extracted placenta entire, using strict antisepsis, washed out uterus and vagina with hot carbolized water.

Applied sterilized cloth to the vulva, to be changed every four hours. Labor having continued seventy-two hours, ordered quinine, grs. iij, at 6, 9 and 12 o'clock next morning.

March 15, mother doing well; child fretful.

March 16, mother resting well, having passed a good night; child having convulsions, ordered chloral hydrate gr. j, bromide pot, gr. jss, in breast milk, injected in bowels every hour. Cold to the head. Died at one o'clock P.M.

March 17, patient having pain in breast with the appearance of milk, ordered breast-binder applied made from a half yard of cloth, yard wide, cutting out place for neck and arms, pinned close over the breast from the bottom, posterior end brought over the shoulder, and fastened to the anterior, to hold in position, lower end fastened to the binder, as directed in the *International Journal of Surgery*. Kept on for ten days.

Patient made a good recovery, with no more trouble. Sitting up after the tenth day.

Quinine in Chorea.—Knapp (*Boston Med. and Surg. Rep.*) reports eight cases of chorea in which quinine was administered in doses of from six to eighteen grains a day, the doses being somewhat smaller than those recommended by Dr. Wood. In addition to the quinine the ordinary hygienic measures and regimen ordinarily recommended in chorea were employed. No other medicinal treatment was given, not even cod-liver oil or any malt preparation. The author sums up the results as follows:

"In one case there was complete recovery in a week after treatment was begun, and in a second in three weeks, but, although this is rather a short time, it is not very remarkable for chorea to recover in that period. The third case recovered after being under treatment ten weeks. In five cases the quinine treatment proved ineffectual, and arsenic was substituted, with distinct benefit in the majority of cases. With the exception of one case, which recovered in a week, the results are neither remarkable nor satisfactory."

The writer does not believe that the use of quinine in chorea can be justified on the hypothesis of its action in stimulating the inhibitory motor functions of the spinal cord, and believes that the good it accomplishes results from tonic properties or to some influence which it exerts on the toxine of the disease. Chorea, he asserts, can not be regarded as a spinal disease. The pronounced cerebral symptoms, and the distribution of choreic movements, which are so often found to affect one side or even one limb predominantly, would of themselves point to the cerebral origin of the disease, even without the evidence afforded by autopsies, which have shown the most marked changes in the cerebral cortex, although the basal ganglia and the cord itself have not been exempt. Choreic movements are not uncommon as a result of structural brain-disease, but they are rarely, if ever, seen as a symptom of disease of the cord. In canine chorea, on the other hand, which is not proven to be the same as human chorea, the changes are chiefly in the cord.

The hypothesis, the writer states, on which quinine is recommended for the treatment of chorea seems to him untenable, and the therapeutic results are based thus far on too few cases to warrant us in ascribing greater virtues to this drug than to arsenic.—*Univ. Med. Mag.*

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EDITORIALS

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DR. E. C. RUNGE, General Medicine.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 2940 Locust Street, St. Louis.

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The Future of Serum Therapy.

The conviction that the antitoxin treatment will have a great future has often been expressed by the REVIEW; but before this—maybe twentieth century—treatment will have gained the confidence of the whole profession and the public there will be, in all probability, many disappointments. It may be safely predicted that in the future a great many serum treatments will be advocated by more or less competent, some incompetent, and some purely mercenary members of the profession, not to mention the great army of quacks. Judging from former experiences with other so called certain cures, there will be a serum manufactured against the majority of diseases and the army of pretenders will be far ahead with their claims of the honest, slow-going, scientific investigators, and the medical profession can not be cautioned and admonished too much to use prudent discrimination and to sift that which is based upon the experience of years of representative men and has stood the test of adverse criticism on the part of the profession of all the civilized countries and which has finally been adopted as true and reliable, from the rash and premature claims of enthusiasts or the fraudulent pretentions of mercenary sharks. For besides the *Scilla* of being defrauded, which is threatening the credulous public from mercenary pretenders, who by means of profuse newspaper and other advertising try to mislead the public, there will be also the *Charybdis* of inexperienced, though honest, enthusiasm, which has so frequently misled the medical profession and which has met with particularly disastrous results in the instance of the tuberculin treatment. After the enthusiasm over Koch's tuberculin had calmed down, it seemed strange that with so little practical experience with this remedy and in spite of the warnings against hasty conclusions by the originator of the tuberculin treatment himself, so many members of the medical profession have been temporarily misled, to the great detriment of the real value of the remedy itself, as well as the good name and esteem of the profession in the eyes of the public.

It is an ever recurring experience that in any disease that has been baffling all therapeutic attempts a new remedy, recommended by competent authority and which has been tried by many practitioners, will for a while meet with better results than anything that has been used before in order to be eventually abandoned again and found of no more, or even less, value than all its predecessors. This is perfectly human and the natural consequence of the difficulties of retaining a purely objective and unbiased judgment with regard to phenomena so hard to interpret as those connected with the biological and pathological processes that take place in the tissues of the human body.

Time, place and innumerable other factors playing a role in misleading the judgment of some of the acutest and most reliable observers, not to speak of the mercenary and fraudulent sharks who ride the waves of opportunity in order to take advantage of the labors of earnest men by working the credulous and enthusiastic public in and outside of the profession for all there is in it, and thereby undermining the respect and esteem in which the honest physician is and should be held by the laity.

California Takes the Lead.

California is the first State of the Union which has made an appropriation for the manufacture of diphtheria antitoxin. The Legislature of California is to be congratulated upon its action of true humanitarianism of passing a bill providing for the manufacture of diphtheria antitoxin by the State. The sum alloted to this purpose is five thousand dollars. Soon after the first reliable reports were published in Germany and France regarding the diphtheria antitoxin treatment the REVIEW advocated the manufacture of the serum under government supervision and, as far as we know, it was the first medical journal in this country, which urged the advisability of such a step.

From the description of the process of manufacture as it is practiced in the laboratories under the supervision of Behring and Roux it is obvious that the manufacture of a remedy like the diphtheria antitoxin should only be attempted under conditions similar to those prevailing in the laboratories of these men who have

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been occupied with similar problems for many years. In view of the dangerous and fatal symptoms that are sometimes produced in consequence of the injection of serum, its manufacture should be controlled by men who have the confidence of the whole medical profession, who are representative bacteriologists and who are aided by competent and conscientious veterinary surgeons in the selection of the adequate animals. The control of the serum manufacture by the State, if conscientiously carried out, would at once exclude the competition by unreliable manufacturers in case of scarcity of the product.

Although it has been claimed by some European clinicians that the diphtheria epidemics of the last few years have been unusually mild and that this has been the reason of the extraordinary success of the antitoxin treatment of diphtheria, the collective evidence with regard to this treatment is so overwhelmingly in favor of it that neither the above fact nor the few disastrous results which have been reported lately and which have been claimed to be due to the serum only, have but little influence in obstructing the universal triumphal march of the serum treatment of diphtheria.

The Missouri State Medical Association.

We are informed that the indications point to a large and successful meeting this year.

Titles of papers are already coming in from representative men in various parts of the State. Those wishing to read papers or present specimens should communicate with Dr. Jno. H. Duncan, Union Trust Building, St. Louis, Mo.

Copies of the constitution and by-laws may be obtained by addressing the Secretary, Dr. Frank R. Fry, 3133 Pine Street, St. Louis, Mo.

The Committee of Arrangements is already at work preparing for the comfort and entertainment of the visitors. Hannibal is an enterprising little city, and it promises a pleasant meeting. The date is May 22, 23, and 24. The railroads have granted a rate of a fare and a third for the round trip from all points in Missouri.

A Verdict for the Hospital.

A unique and interesting damage suit was tried in the Circuit Court of this City during the past week. One John T. Pearson sued the Protestent Hospital Association for damages to the amount of five thousand dollars for the loss of the society and services of his wife, who died at that Institution by reason, as he charged, of the neglect of the nurse. It was alleged that the peritonitis, to which the patient succumbed after a trachelorrhaphy, was caused by "taking cold" through a window which was left open for several hours during the night. Her physician, Dr. D. M. Gibson, a homeopath, contended that this was the cause of her peritonitis, whilst a large number of physicians expressed the opinion that the peritonitis was septic in its origin, and in all probability had its starting point at the sight of operation. The jury gave a verdict in favor of the Hospital Association.

This case is but another illustration upon what trifling grounds law suits are brought against medical men and medical institutions. We congratulate the Protestant Hospital Association upon the outcome of the suit and give expression only to sentiments which could be heard on all hands in the court room during the trial of the case condemning the proceedings against an institution which is doing splendid work for the alleviation of human suffering.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, March 30, 1895; the Presient, F. D. MOONEY, M.D., in the chair.

***

DR. J. W. SMITH presented a patient, 86 years of age, upon whom he had performed an amputation of the right thigh, between the lower and middle third. The occasion for amputating was a chronic ulcerated condition of the leg which had been a source of great annoyance during the past four years.

The amputation was done two weeks ago last Sunday, by the transfixation flap method. The patient sat up on the third day after the operation and left the hospital on the sixteenth day. Union occurred by first intention throughout, and was not even complicated by a stitch abscess.

It is a good example of surgery in the aged, and it would be interesting to know what results others have had in similar cases.

Speaker also presented a specimen of "Salpingitis," but had not definitely settled upon the character of the contents. It looked like an arrested tubal pregnancy.

Six months ago the patient began to suffer with pain in the left side, which was so severe that she was confined to bed six weeks. She improved somewhat in general health, but, although able to be up and about, was never entirely free from pain. Six weeks ago she was seized with a second acute attack, and again became very much emaciated and prostrated. When seen by the speaker two weeks ago a tumor was discovered lying close to the uterus on the left side. The pain was very severe and she was advised to go to the hospital.

At the operation, which was performed yesterday a week ago, the tumor was readily found, but had to be dissected from its attachment to the sigmoid flexure. The adhesions had become firmly organized.

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The doctor also presented a specimen of "Pyosalpinx," in which the tube was distended to the size of an orange. The symptoms in this case presented no unusual features, but the operation was attended by two slight accidents. In making the primary incision the bowel was accidentally cut into, and some fecal matter escaped. The opening was immediately sutured.

In breaking up the adhesions prior to ligation, one of the pus tubes ruptured, the contents escaping into the abdominal cavity. The other tube was removed without rupturing it. The abdominal cavity was flushed with distilled water, and the patient made an uninterrupted recovery. The dressings were not changed until the tenth day.

***

Dr. A. H. Meisenbach presented a post-mortem specimen of "Traumatic Separation of the Lower Epiphysis of the Femur." The case occurred in the practice of Drs. Bribach and Voelker, of South St. Louis, through whose kindness speaker was called to see the patient. The injury was produced by patient, a boy of eleven years, having had his leg caught in a revolving wagon wheel.

He was first seen by speaker twelve hours after the accident, the fracture having been reduced immediately after the injury occurred, and with the patient under the influence of chloroform. When seen twelve hours after the injury, at 10 o'clock Thursday morning, the patient was in good condition physically. The pulse was 112, full and strong, and the anterior and posterior tibial arteries were pulsating normally. Accordingly it was deemed inadvisable to amputate, and at 3:30 that afternoon the leg was placed in a permanent aseptic dressing and confined in a modified Esmarch splint or Voelker's plaster case. Evidence of shock manifested itself soon afterwards; the pulse rose to 160, and although the tibial arteries could still be felt pulsating, they were more compressible. General treatment for shock was instituted by means of hypodermic injection, but the patient died last evening at 8 o'clock.

A post-mortem examination was made after rigor mortis was well established. Those familiar with the anatomy of the joints and surrounding parts will very readily understand that it requires great as well as a peculiar force to separate the epiphysis from as strong a bone as the femur. An attempt was made to dislocate the reduced fragments and bring them out through the original opening, but this could not be accomplished very readily. The periosteum was found separated from the shaft of the bone for about four inches. As far as could be determined, the joint had not been penetrated, and an examination of the specimen will show the capsule unbroken at its upper line of attachment to the shaft. There was also no evidence of effusion or infiltration into the joint. About two inches of the shaft and the epiphysis was removed.

Several interesting features present themselves in connection with the case. The first point is as regards the proper course to pursue in cases of this character. Formerly amputation was resorted to immediately; but the good results latterly achieved by conservative methods have rendered that operation unjustifiable in the early stages. Union has occurred directly, or has subsequently been brought about by resection or other surgical procedure.

Suppose the boy had not died from shock, would union have occurred in spite of the denudation of the bone of its periosteum at the site of the fracture? Some surgeons hold that periosteum takes no part in the generation of bone, and we can not express ourselves positively whether or not union would have occurred in this case.

. If amputation had been done at the time of the accident, would it have averted the fatal outcome? Although no symptoms of injury to the abdominal or thoracic viscera or to the brain were present in this case, the possibility of these complications must always be kept in mind in instances of delayed fatal shock. It is claimed by many surgeons that some deeper organs are injured in all cases of severe shock that terminate fatally. It is, therefore, questionable whether immediate amputation would have averted the shock or prevented the fatal outcome.

The case of pathological separation of the lower end of the femur, presented to the Society during the past winter, in which a resection of the joint was made, has resulted favorably. The patient is getting around on crutches.

Speaker presented also a specimen of "Carcinoma Mammæ." The history of the case included all the symptoms characteristic of the trouble. One feature of importance, to which speaker had referred on previous occasions, is the involvement of the lymphatic glands of the deep pectoral and axillary regions. Although their involvement could not be demonstrated before operation by palpation, a careful dissection of the regions was made and a chain of enlarged glands was removed. Experience teaches us that this is the only correct way to treat the disease. No matter how small the tumor may be a radical operation should be made.

***

Dr. Henry Summa read the following history of a case of "Fetus Papyraceus," and presented the specimen.

The history of the case of fetus papyraceus, of which I present the specimen to night, is as follows: Mrs. K., aged 38 years, multipara, had twins twice (not including the case under consideration), and two single births.

About two months ago she was delivered of a full-term, male child, and about one hour thereafter, during third stage of labor, this interesting specimen of fetus papyraceus was expelled, together with the placenta. Nothing further of an abnormal character occurred.

It may be of interest to some of the members present, to cite the following translation from Privat Docent a Duehren's Geburtshilfe, published by S. Karger, in Berlin in the latter part of 1894.

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Manifold Pregnancy.—According to G. Veit, there occurs among about 90 births one case of twins, and among about 8,000 one case of triplets.

Their origin is due either to the fact that several ova (they may originate from *one* or *two* follicles; the latter may, as the corpora lutea proves, lie in the *same*, or one in each of the ovaries); are expelled during one menstruation, and are (eventually by different cohabitations) fecundated, or that the fecundated ovum contains several germinal nuclei.

Superfecundation.—A superfecundation, the fecun dation of a second, later produced, ovum, is possible only in the first three months, as long as the decidua vera and reflex are not yet agglutinated with each other. But also in this time of pregnancy is super-fetation to be denied, since ovulation ceases during pregnancy. As a matter of fact, we come to the conclusion that there existed such a condition as superfetation only through the observance of the difference in size frequently seen between twins. The differences are, moreover, most prominent in mono-ovular twins, in which cases there could be no such thing as superfetation. (B. S. Schultze).

These differences in size in such twins are due to an inequality in their development, which Schultze explains by the asymmetry of the third circulation in cases of the mono-ovular variety. Schultze terms the third circulation the vascular anastomosis which is always present between the placentæ of mono ovular twins.

That twin who gives the other one more blood than he retains himself, frequently dies during the pregnancy, mummifies and, in addition, is pressed upon and flatened by the other one. (Fetus papyraceus—the fight for existence in the maternal abdomen). He may be born prematurely, whilst the other one may continue to develop in utero.

On the other hand, it may occur that that twin which sends more blood into the circulation of the other one, may produce a reverse circulation in the latter so that the blood in the umbilical artery of the latter flows into the heart and there produces atrophy. In this way originates the *acardiacus*.

If one considers the origin of the membranes, it be comes clear that the mono ovular twins have a chorion and decidua in common; whilst, on the other hand, the multi-ovular have only the decidua vera in common. A decidua reflexa is possessed in common by the multi-ovular twins only in the rarer cases, where both ova have imbedded themselves very close together in the mucous membrane of the uterus. The placentæ are, in both, originally separate.

Mono ovular twins are always of the same gender.

In twin pregnancy, parturition frequently takes place prematurely; but even full-term twins remain below the average in weight and measure.

If the embryonal layers of mono ovular twins blend with each other, then the result will be double monstrosities.

***

Dr H. C. Fairbrother reported four cases of "Endemic Cerebro Spinal Meningitis" as follows:

Case 1. Child, aged eight months. February 26, had temperature of 102, cerebral symptoms, and slight exanthematous eruption. Symptoms abated in about one week, but were followed, March 10, by choroiditis of left eye, resulting in its total destruction.

Case 2. Child, two years of age. Attacked on March 6 with decided cerebro-spinal symptoms, dying on the second day.

Case 3. Child, six months old. Attacked March 21; convulsions, gastric irritation, slight erythematous eruption running into the petechial state; well-marked opisthotonis. Death on third day.

Case 4. Child of eight months. Attacked March 26; temperature of 105°, convulsions; vomiting and well-marked petechial eruption. Death took place on the third day, and the petechial spots were more distinctly marked after death than before.

Three of these cases occurred within a radius of three blocks, and the fourth one about a mile distant.

Dr. H. Jacobson recalled a somewhat similar case in a boy 7 years old. The temperature varied from 101 to 104°, without any regularity, and the delirium was very marked. Anesthesia of one side, and paralysis of the left arm followed the acute stage but have since disappeared. Deafness of the left ear followed subsequently, and the child has never regained the hearing. A peculiar complication in this case was the passing of about two handfuls of ground worms, which were probably responsible for some of the nervous symptoms.

St. Louis Obstetrical and Gynecological Society.

Regular Meeting, Thursday Evening, March 21, 1895. Dr. W. H. Ford, President, in the chair.

***

Sub Mucous Uterine Fibroid Tumor.

Dr. Gehrung.—The specimen I have here is not of particular value as a specimen in itself, but there are certain features connected with it which may bring out quite a number of points in discussion. There are some points on which I myself should like to have more information.

The patient was a lady thirty years old, married ten years, had two children, two miscarriages and had complained of no pain. What worried her most was sleeplessness, which had continued for about two years. The next point was a profuse menorrhagia, which came on about every thirty days and lasted from four to six days. She had quite a profuse leucorrhea of a watery kind, more or less fetid. On examination I found the cervix lying very high, very much enlarged and slightly lacerated. Anteriorly to the cervix was a tumor about the size of a three months' pregnancy. The cervix was posteriorly high up. In other words, it represented an anti-flexion—the cervix high up posteriorly and the fun-

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dus and body of the uterus pressing down anteriorly, partly rotated from right to left and inclined over towards the left; it could be felt quite prominently even through the abdominal walls. The sensation conveyed to the touch was that of a semi-solid tumor, resembling that of a cystic fibroid and not unlike that of pregnancy. As I could not decide positively at the first moment whether or not it was a pregnancy, as there was considerable discoloration of the vagina and cervix and pulsation of the uterine arteries, I waited until the next menstruation came on. Though I had grave doubts as to pregnancy existing, I used great precaution not to explore the interior until I had a better knowledge of it. After this menstruation I examined the interior of the womb, the probe first entering about two and a half inches, when by a twist to the right I could push it about two inches farther, and from this I concluded that the tumor was probably an intra-mural tumor of the anterior wall of the uterus, the latter rotated and inclined over towards the left. As the patient positively refused anything of an operative nature, she wanted me to do any thing that I possibly could for her without that, so I used the vaginal tampon for some months to repress the profuse menstruation, and electricity at the intermediate periods, and succeeded gradually in curing her symptomatically. She began to sleep, the hemorrhages ceased, she menstruated normally, the vaginal discharges diminished very much, and things went on well. The tumor seemed to diminish for a time, but after some months it appeared to enlarge again, the menstrual discharge increasing and becoming very fetid so that carcinomatous degeneration was feared. The health of the patient was seriously undermined and she again became sleepless, so that finally she insisted upon an operation, as her condition had become unbearable. So about two weeks ago I removed the uterus with the appendages. The patient has not had an unpleasant symptom since and is doing very well. After the removal of the tumor I still thought that my diagnosis was correct. I had not a full understanding of the case until I examined it by opening the tumor and then I found it to be a sub mucous fibroid, with very broad attachment to the uterine walls. The strong inclination of the uterus towards the left had made it impossible to carry the probe anywhere else than to the right corner, especially through the elevated cervix. The right ovary presented itself near the abdominal incision, while the left rested posteriorly and below the tumor in the left iliac fossa. It is this state of affairs that deluded me into the belief that the uterine cavity was limited to the space reached by the sound. Had the diagnosis been fully known the question would have come up, should this tumor have been removed by vias material or by dilatation of the cervix and splitting the capsule? But even if such had been done I think the operation would have been far more dangerous than the one practiced, especially as the os was very narrow and the walls of the womb very thin.

Dr. Lutz.—How did you apply the electricity.

Dr. Gehrung.—I applied it generally in the uterus, as high up as I could get it and at times in the vagina with a large electrode over the tumor.

Dr. Lutz.—In the cavity?

Dr. Gehrung.—In the cavity of the uterus, and it stopped at first the symptoms of the trouble. I also applied at certain times the positive pole, for the sake of lessening the tendency to hemorrhage. There has been no appreciable decrease in the size of the growth; on the contrary it seemed rather to increase lately, showing that the electricity had no power on this tumor at least, or on the tumor under these circumstances. On the other hand, it is said of electricity that it causes adhesions of tumors, not only by punctures, but electricity applied generally. There is another interesting point. The womb was immovably fixed, and I thought there must be adhesions, especially anteriorly, because I could not elevate nor retrovert the womb, but on opening the abdomen I found that there was not a particle of adhesion anywhere around it; the bladder was attached and carried very high which prevented the mobility. Now that would show—to a great extent at least—that electricity is a harmless agent, as far as adhesions are concerned, and what adhesions were found in other cases and by other operators must have been there from other causes and were not produced by the electricity.

The points for discussion, Mr. President, that I would like to place before the Society are these:

1. Which, if the diagnosis were fully known, would be the preferable procedure—the old way of dilating the cervix, splitting the capsule and removing the tumor by the slow process of sloughing, or forcible traction, or, by hysterectomy as has been done in this case!

2. Should vaginal hysterectomy have the preference with a tumor of this size, or celiotomy?

3. Should the use of electricity have been continued longer? Was the use of electricity at all indicated in this case? Does electricity—if judiciously applied—ever cause such adhesions as some electrophobes pretend?

4. Should the adnexa be removed or left *in situ* (*a*) if moderately diseased; and (*b*) if healthy?

Dr. Lutz.—How did you treat the stump?

Dr. Gehrung.—I treated the stump according to Dr. B. F. Baer, of Philadelphia. I ligated the ovarian artery and part of the broad ligament, then clamped right under the Fallopian tubes up to the very body of the uterus. I then cut the broad ligament between the ligature and the clamp, and made an incision around the uterus anteriorly about two inches below the fundus posteriorly lower down, and after repeating the same on the other side stripped the peritoneum downward anteriorly and posteriorly, then ligated the uterine arteries including the remainder of the broad ligament, excised the cervix somewhat cup-shaped and very near the vaginal insertion, then covered the stump by the infolding peritoneum.

Dr. Glasgow.—Did you cauterize the cervical canal?

Dr. Gehrung.—No, sir; nor did I use drainage. The

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ovaries seemed to be rather large and cystic. You still see some remnants of them, but whether these cysts actually constituted a disease or not is a question with me. I removed the ovaries, and I feel that I acted rightly. If I had left them I would have accused myself of having made a mistake, as they were certainly diseased and there was no use for them.

Dr. Lutz.—What were the nervous phenomena, if any, in this case?

Dr. Gehrung.—She was extremely nervous, which was brought about probably by protracted insomnia. If a person suffers for nearly three years from loss of sleep and three or four years from menorrhagias the whole system gets debilitated and pre eminently the nervous system. The question arises, should the ovaries be removed or should they be left, if entirely healthy; or, how should we dispose of them in a case of this kind? I would like for my own guidance to hear the opinions of the gentlemen present on this subject.

Dr. Papin.—I am very much interested in the question which the doctor asks in reference to the feasibility or possibility of removing or leaving the ovaries intact. It is the question of questions in this operation. I ask myself the question, would it have done to have let the ovaries stay there? Would it it not probably have been a source of trouble? On the other hand, in removing them you entirely unsex the woman of course, and which in the most desirable of the two—to leave the source of a trouble that may last for fifteen or twenty years, if she is a young woman, or to entirely remove them and be done with it? I think that the doctor did wisely in removing the ovaries.

Dr. Gehrung.—I would like to call attention to another point, which may speak in my disfavor, and that is this—that the removal of the ovaries has frequently been accused of being the cause of insanity in later years.

Dr. McPheeters.—Is it an established fact that removing the ovaries does predispose to insanity?

Dr. Gehrung.—It seems to be an established fact.

Dr. Boisliniere.—In a few cases.

Dr. Gehrung.—The opinions are so divided that I really do not know on which side is the preponderance.

Dr. Papin.—If insanity occurs in a woman whose ovaries have been removed the question is, is there not a predisposition to insanity in the family?

Dr. Lutz.—Let me ask you this question, on the other hand, Dr. Papin: Isn't it a fact that in those cases in which the adnexa are removed, in cases of fibroids which we consider not fit for removal except by hysterectomy, that in many of these cases there follow a train of nervous symptoms and hysterical conditions which, in a few cases that I have under my observation, are very appalling?

Dr. McPheeters.—Do you mean where the ovaries are left or where they are remoqed?

Dr. Lutz.—Where they are removed. Let me illustrate this by one case which is the most impressive one to me. A religeuse about thirty-five years old had been bleeding for eighteen months. She had had good health. She was a lay sister, and did the work assigned her, which I think was in the wash kitchen; anyhow she did lay work—that of a servant. She complained of nothing, she had no nervous symptoms of any kind, and her only difficulty was frequent menstruation, as she supposed. When her attention was called to it she had been suffering from these hemorrhages for about eighteen months and of course was very reluctant even to be examined. I made the diagnosis of an intra-mural fibroid. I dare say it measured eight inches in diameter. I suggested to her the operation, to which she consented. I did not feel like I could remove it by morcellment, because, as I say, it was intra-mural. I suggested the removal of the ovaries, to which she consented. I made a celiotomy and found this immense intra mural fibroid. Now is it not a question whether I should have done one operation or the other—whether I should have removed the uterus or whether I should have removed the adnexa. I merely wish to report the fact that I did remove the adnexa. She made a good recovery so far as the operation was concerned. For a month, maybe two months, she had slight hemorrhages, then they entirely stopped and she has never had a hemorrhage since.

Dr. McPheeters.—Left the womb, did you say?

Dr. Lutz.—Left the womb, but removed the appendages She has had no hemorrhages since, and that has been about two years ago, but she developed a train of nervous symptoms which have made her an invalid. She is unfit for any kind of work, she is hysterical, suffers from sleeplessness, palpitation of the heart and constipation; in short, she is a very miserable creature. Now to my mind there is no question but these nervous phenomena dated back from the time of the removal of the appendages in her instance. That is an extreme case. There is no question but that in the economy of woman ovaries play a very important part so far as the nervous system is concerned. I ask myself this question: Why don't we have these nervous disturbances when we remove diseased ovaries in the shape of a double ovary, for cystic degeneration of both ovaries? I have removed a number of double diseased ovaries, and cannot recall one case in which the removal of the ovaries was followed by these profound nervous disturbances; but I can recall nervous disturbances traceable to the removal of the appendages in cases of fibroids. You know that years ago Martin suggested (I think it was Martin, at least I know he did it in many cases) leaving a portion of the ovary, not so much, as I recall it, for the purpose of preventing nervous symptoms from following as because of an idea that possibly ovulation would go on. I refer now to diseases of the ovary.

Dr. Gehrung.—Where the womb is left?

Dr. Lutz.—Where the womb remains. Another interesting physiological question comes up: Supposing that Dr. Gehrung, instead of removing the ovaries in this case, which I think I would have done as I see it now, and had left the ovaries, what becomes of ovula-

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tion? And I am free to say that I have no very clear conception on that point. I can understand how with a ligature of the ovaries and uterine arteries atrophy of the ovary in all likelihood will take place, and the ques tion is whether this gradual destruction of the physio logical function of the ovary does not play a part in pre-venting the appearance of nervous symptoms. As I say, my notions on that are not clearly out, I would not like to express an opinion, but it is a question that comes up. Does the gradual atrophy prevent these nervous symptoms?

Dr. McPheeters.—Wonuldn't removal of the ova-ries tend rather to relieve or prevent than to produce hysteria?

Dr. Lutz.—That is a question.

Dr. McPheeters.—Isn't it probable that if you re move the uterus as well as the ovaries you avoid this hysteric condition?

Dr. Lutz.—Well, may be so.

Dr. McPheeters.—Dr. Lutz, in your case, what was the advantage of leaving the uterus after you had re-moved the ovaries; and in Dr. Gehrung's case, what was the advantage of leaving the ovaries after he had re-moved the uterus?

Dr. Lutz —I can answer the question in my case. The size of the tumor made me hesitate about remov-ing the uterus; in other words, I felt like the magnitude of the operation—the removal of the uterus—appalled me.

Dr. Glasgow.—I take a special interest in this case of Dr. Gehrung's. I think it is an unusual case. It demonstrates to us the apparent innocuousness of large doses of electricity. Now I myself have thought, that it would have more effect on the interior lining of the uterus than it has done here in this case. I am sur-prised to see no evidence of cauterization, but there must have been some, or there would not have been this fetid discharge. There must be some necrotic tissue there. The mass of the tumor is not necrotic.

Dr. Gehrung.—Electricity has not been used in large doses for the past two months; it was after the electricity was used in lesser doses that the fetid dis charge began.

Dr. Glasgow.—I do not mean to imply that this fetid discharge necessarily resulted from the use of the elec-tricity, but I think it would tend to induce it. We know that tumors of that kind become necrosed, and they are certain to slough before they are expelled. I do not see any evidence of harm done by the use of electricity, and it apparently did benefit the patient for a while. I have seen this result in a number of cases. I have seen patients who would feel better have less pain, the hem-orrhage was less, and the tumor diminished in size. I doubt very much whether that tumor would have been cured by electricity, it might have been cured in the old fashioned way by expulsion. I had one case very much larger than that, and I believe Dr. Boisliniere knows the case too, where the uterus was two inches above the umbillicus, which sloughed out. The uterus became deeper and deeper up to nine or nine and a half inches, and then gradually smaller and smaller. That woman recovered with a uterus about four and a half inches deep and remained perfectly well. I washed that uterus out twice a day for a month with a single or a double catheter, sometimes one, sometimes the other, turning it around inside of the uterus so as to let out every little pus cavity. That woman got well and that tumor was probably five or six times as big as this.

Dr. Lutz.—How did you get it out?

Dr. Glasgow.—Piecemeal, it sloughed out; the wo-man was in such a condition that we did not believe she could possibly go through an operation. We couldn't use electricity, that was out of the question. She couldn't stand anything. By thorough washing I kept the sepsis down. She had some fever all the time, but by using the catheter as I have stated she got well. So it is possible for a tumor like that to get well without the removal of the uterus, but I think it is far less dang-erous to remove the uterus, as has been done in this case.

There is another point, as to whether those ovaries should have been removed or not. I believe Dr. Geh-rung did right in removing them. As long as the ova-ries are present, a woman is going to have this monthly cycle, this monthly plethora, and that blood has got to get out somewhere. If it does not get out it is going to cause disturbance.

Dr Papin.—Beg pardon, but where does that blood come from?

Dr. Glasgow.—It may be from the system where all the rest of the blood is.

Dr. Papin.—Then where is it going to?

Dr. Glasgow.—It may come out and it may not come out. If it does not come out the woman's system is go-ing to suffer. She will complain of pressure about the heart, palpitation of the heart, headache, sensitiveness over the whole abdomen. I have tried one thing for these cases which acts like magic, and that is to bleed them. The first case I treated this way I took only about three or four ounces of blood, and it didn't re-lieve. I then took three or four more and inside of half an hour the patient was better and she was soon all right. I do not recall in any work I have ever read to have seen bleeding recommended for this trouble fol-lowing the removal of the ovaries. I should not be a bit astonished if in many cases of insanity following the removal of the ovaries the cause was due to this ex-cess of blood in the system that can not get out. I do not believe that removing the ovaries is going to cure any case of hysteria.

Dr. Lutz.—Unless it is of ovarian origin; don't you think there may be hysteria from ovarian disease?

Dr. Glasgow.—Well, yes, I do, there are a very, very few cases; but they are so few that you would not run across them very often. But I do not believe it is a justifiable operation generally. The reason why these phenomena do not follow the removal of diseased ova-ries is due I think to the gradual cessation of this ova-

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rian function, there is a gradual letting down of the system. I do not think that the ovaries are of much use without the uterus. Another thing in regard to ovulation, what becomes of the follicles? Ovulation commences before menstruation commences, and we know that ovulation goes on after menstruation ceases, and it is not necessary apparently that these ova should escape into the uterine cavity, neither is it necessary that there should be a menstrual flow.

Dr. Lutz.—I would like to ask Dr. Glasgow if he knows the relative results in cases where morcellement is practiced for uterine fibroids and where hysterectomy is practiced. Morcellement is an operation that I have had a very great dread of, after I had seen quite a number of operations done in Paris. It seemed to me an operation requiring so much time, was so difficult to do, and it left behind it certain ragged, torn surfaces, which I did not see how they could be kept from being infected.

Dr. Glasgow.—I do not know of any statistics, I can not recall any. I must say that I have the same horror of that operation that Dr. Lutz has. I think it must be harder on the woman, and her chances of living are not so good as from an hysterectomy such as we can do nowadays. I do not expect to do morcellement, and would rather trust to the powers of nature to expel it, assisted by ergot, and washing out the uterus as I say I did in that other case. I would ask Dr. Gehrung if ergot was used in his case?

Dr. Gehrung.—No doctor.

Dr. McPheeters.—As to the sloughing, what was the cause of that?

Dr. Glasgow.—It was a natural contraction of the uterus. The ergot had so bad an effect that I gave her hydrastis, and it was the alternation of hydrastis and ergot that brought about the contraction of the uterus, simply shutting off the blood supply of the tumor.

Dr. Boisliniere.—I think this operation was called for, and you did very well, Dr. Gehrung, to perform it.

Dr. Gehrung.—I am much pleased to see that the members took such a lively interest in this discussion. Since the time does not permit me to take up the questions seriation, I shall only say, that in a similar case I would most likely repeat what I have done in this.

Note.—The patient had not a bad symptom and was fully able to leave the sanitarium on the 21st day.

Numerous slight ailments are directly traceable to a weakened condition of the digestive organs and an improper assimilation—the result is imperfect nutrition, whether due to an excessive ingestion of non-assimilable food or a diminished and vitiated condition of the natural digestive secretion. Especially do we see this enfeebled digestion in certain forms of fever, whether of the sthenic or asthenic type, in neuroses, anemia, general debility, and the diarrhea of infants. In all these cases Zumo-Anana (Pine-Apple Digestive Wine) meets the full requirements. It at once carries on the process of digestion, giving tone and vigor to the weakened peptic glands and restoring their natural activity, whereby the proper food elements can be taken up by the absorbents and incorporated into the living tissue.

ABSTRACTS

MEDICINE.

On Malaria as a Waterborne Disease.—The *New Orleans Medical and Surgical Journal*, June, 1892, contained an article by Dr. Richard Waggoner, of Pensacola, that illustrates very plainly the affirmative side of the question, "Is Malaria a Waterbone Disease?" The following is an extract therefrom:

"The writer has resided, during the past five years on the Naval Reservation near Pensacola, Fla., serving as Apothecary at the Pensacola Naval Hospital. The Naval and Army Reservations are situated on the north side of Pensacola Bay, about seven miles southwest of Pensacola, and about 1 and ½ miles from the Gulf. The Navy Yard, the villages of Warrington and Woolsey lying just without its walls, and the Naval Hospital, three-quarters of a mile west, are situated on the Naval Reservation, and Fort Barrancasis, situated on the Army Reservation, one mile west of the Navy Yard.

"The villages of Warrington and Woolsey are at the present day extremely unhealthful places, being strongly malarious throughout the whole year, and especially so during the summer and autumn. This condition of affairs has existed during the whole period of my residence there, but the older inhabitants all unite in declaring that previous to about the year 1872 the place was considered very healthful, that chills and fever were unknown, and that people from the interior would locate there to recuperate from malarial troubles. After carefully investigating the matter, I have concluded that the water supply of the villages in question is the source of the greater part of the malarial poison, because the only change of a sanitary nature which has occurred to them consists in their water supply, and in this they have made a very decided change. The villages are the offspring of the Navy Yard, upon the location of which potable water was sought and evidently found, consisting of two springs at the foot of the rise alluded to above, which boiled up out of the pure white sand, clear and cool even during the hottest part of the summer. The authorities in the Yard, having at that time no reservoirs for collecting rain water, caused these two springs to be curbed in with brick for their own supply. These springs are still in existence, and are known as the 'Commodore's Springs.' This source supplied most of the drinking water to families residing in the villages, a small portion of them possessing cisterns, but preferring this water in summer on account of its coolness, until about the year 1872. About that time driven wells were introduced to them, and these being cheap, quickly put in operation and convenient, it was not long before almost every household had one or more of them in the back yard. The wells are driven,

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as a rule, only about twelve feet deep, some of them half that depth.

"Another fact: in January, 1886, a Marine Guard, numbering about forty men, arrived at the Pensacola Navy Yard for duty at that station. These men came directly from the North, and were in fine physical condition. During their first year on the station they began to have frank attacks of remittent and intermittent fever; during their second year there was a much larger proportion of them on the sick list, and between July 1 and August 15 of their third year (1888) every man in the Guard had an attack of either intermittent or remittent fever, twenty five of the forty being in the hospital at one time.

"The annual report to the Surgeon-General for the year 1888, says: 'The health of the Marine Guard grew worse almost steadily during their stay here until in the early part of August, 1888, before the sickly season had reached its height, they broke down completely, and had to be carried away bag and baggage.'

"The water supply of the Navy Yard consists in a brick cistern for each of the officers' quarters, and three large cisterns, with a combined capacity of 500,000 gallons, affording the general supply. The Marines were supposed to get their drinking water from one of the large cisterns, the nearest of which is about 200 yards from the barracks, but unfortunately for them there was a driven well very near their barracks, from which they derived the greater part of their drinking water. On the other hand, the officers and their families residing in the Yard used cistern water only, and they were entirely exempt from malarial diseases, sickness of any kind among them being little or none. At Fort Barrancas, only a mile from the Navy Yard, the enlisted men, more than double the number of the Marine Guard, used cistern water exclusively, and their health during the period of so much sickness among the Marines was excellent.

"The third fact is as follows: the present Naval Hospital buildings were constructed in 1875, on the foundations of the old hospital destroyed by fire during the civil war. The water supply consisted until the early spring of 1890, of two driven wells, eighteen feet deep. During the whole time this water was used the place was very unhealthful, the attendants having attacks of malarial fever every year, and patients admitted with other diseases would often develop malarial manifestations while at the hospital. During my first year at the hospital I apparently escaped the poison, but during the two succeeding years, 1888 and 1889, I had several attacks of malarial fever, my wife suffered from it even more than I, and our little girl, during her first and second summers, had typical paroxysms of intermittent fever. In the spring of 1890 an old brick cistern, a relic of the old hospital, was repaired and put in use, since which time we have used cistern water only at the hospital for drinking purposes, and there has not been the slightest evidence of malarial trouble of any kind in my family."—*Journ. Am. Med. Ass'n.*

Report of a Case of Septic Poisoning Following the Use of Antitoxin.—In the *Medical Record* of January 19, 1895, an article by Dr. A. Seibert, gives an account of the toxic effects of antitoxin treatment which are so very similar to those occurring in a case of my own, and yet having some points of marked contrast, that I deem it of interest to note them.

The patient, Elizabeth B., aged 3 years and 4 months, had not been well for two weeks previous to the present illness—having had a persistent cold and so-called "bilious condition," with clay-colored stools, loss of appetite and general malaise.

On December 21, the child was constipated and had fever. She was first seen by me December 22. Temperature, 103° F. (groin). Child peevish and somnolent; tongue coated; some pallor and loss of appetite. No swelling of the glands, and the throat absolutely clear and hardly injected; some coryza; no fetor to breath.

December 23.—In the morning slight deposit on left tonsil. Glands of neck slightly swollen. Temperature, 102½° F. (groin); afternoon temperature, 103½° F. Child restless and depression marked. Ordered tincture of chloride of iron and whiskey in full doses.

December 24.—Deposit decidedly more marked on both tonsils, and decidedly diphtheritic in appearance. Some albumin in urine. Temperature, 102½° F. At 8 P.M., 11 c.c. Pasteur's serum were injected in loin.

December 25, 8.30 A.M.—An injection of 10 c.c. serum was given. In afternoon, temperature (axilla) 98° F. The throat gradually cleared. Temperature was uniform at 98° from December 25 to 30. Swelling of glands diminished—albumin was disappearing.

December 31.—Throat was practically clear and convalescence appeared to be established. Pulse ranged from 96 to 106. Iron and whiskey were continued throughout.

January 5.—In afternoon, temperature was 99.6° F., and there was slight swelling of glands on left side of neck behind sterno-mastoid muscle.

January 6 (thirteen days after injection).—Glands were swollen on both sides of neck in corresponding location. Temperature, 101.4° F.; pulse, 112. A discrete eruption of raised, flat papules appeared on buttocks. They were of rather dusky-red color, closely resembling the eruption caused by antipyrine. There was no rigor; there was, however, some stupor, somnolence, depression and loss of appetite. Child complained that eruption hurt, which probably would be better described as itching or burning. There was, also, a general hyperesthesia of the whole surface; but no distinct joint swelling or pain as in Dr. Seibert's case. The temperature ran to 102.2° F. (its highest point), with pulse of 145 and respirations of 33.

January 7.—Temperature ranged from 99.9° to 101.8° F. Pulse, 118 to 130; respirations, 28 to 32. The rash next extended to thighs, legs and feet; then attacked the hands and arms, face and neck; lastly extending from buttocks on to the back, abdomen and chest. It was more marked on back and chest, and was generally

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discrete in distribution, although there was coalescence at times, with large, white, clear areas, such as we see in measles. The general appearance varied but little. The papules were large—flat and raised—varying in size from that of end of slate pencil to the size of a silver three cent piece or larger. The color was dusky-red. There were no vesicles or pustules. The hands, forehead, arms and face showed considerable edema. During all this time the throat remained perfectly clear, and there was never a suspicion of return of the exudate. The urine was almost completely suppressed and the amount of albumin much increased. This was relieved by cupping the loins and the use of the hot pack.

January 8.—The temperature ranged from 99.8° to 102° F.; pulse, 104 to 125.

January 9.—Temperature from 101.2° to 102.2° F.; pulse, 118 to 130.

The rash lasted from three to four days. The first papules appeared on January 6, and the skin was practically clear on the 10th. As each new crop appeared there was a rise of temperature.

January 10.—Temperature at 1.50 A.M. was 101.2° F.; at 8.45 A.M., 98.2° F.; at 1 P.M., 98° F.; at 7.40 P.M., 96.-2°. At this time (7.40 P.M.) pulse was 100, fair in quality. Second sound of heart very indistinct, feet and hands cool; ordered whiskey, ammonia, and hot beef extract.

January 11.—Temperature ranged from 97° to 97.6° F.; pulse from 96 to 106. Ordered tinct. nux vomica one drop every four hours; increased to two drops at 2 P.M. Pulse somewhat better and sounds clearer.

January 12.—Temperature, 97° to 97.4° F.; pulse, 99 to 102.

January 13.—Temperature reached 98° at 5.30 P.M., with pulse of 190. General condition about the same.

January 14.—Temperature ranged from 97.2° to 97.9° F.; pulse, 80.

January 15.—At 9 A.M., temperature dropped to 96.2°, with cool extremities; some pallor and depression. At 10.30 A.M. temperature was 96.4° F.; at 12.45 P.M., 96° F.; at 3.15 P.M., 96.4° F. From that time on it ranged from 97° to 97.3° until 9 A.M. on the 17th, when it again touched 98° F. At 6.30 P.M., temperature was 98.3° F.

January 18.—At 4.30 A.M. temperature was 97°, and from then on ranged from 97° to 98 F. On the 19th, at 4.45 P.M., it reached 98.2°, and from then on resumed normal.

These temperatures were all taken by axilla, the thermometer being left in position for fully ten minutes. This was done because it was found practically impossible to take it by rectum, as it caused too much disturbance.

On December 25, the child's mother had slight deposit on left tonsil, with slight chill and temperature. On December 26, there was also deposit on right tonsil. On that date 15 c.c. of serum were injected, and on the 27th 10 c.c. were injected. She was also ordered tinct. ferri chloride and whiskey, and irrigations with hot boracic-acid solution. Five days after the first injection she had an eruption appearing first on the toes and feet, and afterward on the hands and arms. This was described as being in wheels and welts, intensely itchy, burning, and stinging. It always appeared at night, and was so faded, or practically gone, in the morning, that I never saw it. This was repeated for three or four nights. It was not accompanied by any constitutional disturbance.

The points of greatest interest were the peculiar rash appearing at such a remote date (thirteen days) after the injection, and the subsequent subnormal temperature, which persisted almost continously from January 10 to January 18. Also the fact that the mother's rash appeared five days after the injection, was evanescent in character, and accompanied by no constitutional disturbance.—Edward J. Ware, M.D., in *Medical Record.*

A Case of Poisoning with Nutmegs.—In the *Lancet* for January 19, Mr. T. G. Simpson, L.R.C.P., Edin., relates the following case (*N. Y. Med. Jour.*): On December 9 his assistant was called to see a woman, twenty-six years old. He found her lying on the bed in a drowsy condition and very delirious. There were fairly lucid intervals, when she complained of a sensation of great tightness across the chest and of vertigo and faintness when attempting to rise. She vomited several times. The pulse was 75 a minute and rather feeble; the heart's action also was feeble; the pupils were normal. It was ascertained upon making inquiries that the patient, who was a strong, healthy woman, had taken two nutmegs crushed in a small quantity of gin, as she had gone over the menstrual period for a week. The assistant directed her to remain in bed and to take a little strong coffee with a dessertspoonful of brandy in it every half hour. He also prescribed a mixture of potassium bromide, ammonia carbonate, sodium bicarbonate, spirit of cajuput, and chloroform water (quantities not stated). The author himself saw the patient a few hours later and found her condition improved, but still showing the same symptoms. He continued the treatment, and the next day she was very much better, although there was a little vertigo, and she was very weak. The coffee and brandy were given up, but the medicine was continued and on the following day she was able to get up. Since then recovery had progressed favorably. The author adds that the nutmegs had no effect whatever in producing miscarriage.

One Reason for the Preponderance of Nervous Diseases.—One of the principal reasons, in my opinion, for the enormous increase of nervous diseases, is to be found in the management and rearing of the infant as now and for some time past practiced, especially in the average American families.

It is almost a universal fact that from the hour of its birth to the hour of its maturity the American human infant is constantly subjected to a course of stimulation,

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so far as the nerve centers are concerned. The young parents, and the older ones, as well as the grandparents and uncles and aunts, each and all are so anxious to have the baby a smart, cute little thing, that every device that can be thought of is resorted to in order to stimulate the child's mental faculties and to have it notice objects as soon as possible; and here let me say that I really believe in some instances they have succeeded in developing that faculty as early as the first few days of life. As it grows older, it is urged by every means known to humanity to talk, to give expression to its thoughts in any possible way or form; and by the time such an infant is four or five years old its nerve centers have been so fearfully developed and overstimulated that it is quite possible for it to give expression to opinions and ideas which would compare favorably with those of maturity. This condition of things is made to ramify every channel of life which it is possible to bring before the infant; and such conditions are continued until the child degenerates into hopeless lunacy from overstimulation, or else "becomes its own master," as the saying is. When such an infant has reached its majority and maturity, it usually comes before the world with a nervous system already wrecked by having been overstimulated and developed, and therefore unable to stand the strain usually demanded from a healthy, well balanced system.—A. M. Beers, M.D., in *Columbus Med. Jour.*

Treatment of Nephritis with Packing and External Application of Pilocarpine.—The author's method of treating nephritis consists first in embrocation of the entire trunk with an ointment of the following composition:

Pilocarpine Nitrate, 5 to 10 ctg. (¾–1½ grn.).
White Vaselin, - - 100 gme. (3½ oz.).

Larger doses of pilocarpine produce disagreeable skin eruptions, which might necessitate interruption of the treatment.

The body is then covered with a compact layer of cotton and a sheet of impervious material, and the whole fastened by bandages. The dressing is removed only when it has been completely soaked by perspiration, and it is then renewed after a few hours.

The result of this treatment (with or without milk diet) was, as a rule, prompt cure in the acute cases, and a considerable improvement in the chronic ones, often extending over a number of years. There were at least fifty cases thus treated. The author attributed the advantage of this method to both the sudorific and the concomitant diuretic action of the pilocarpine. This action seems to be purely local, no trace of the alkaloid being found in the urine.

The author regards his method specially beneficial during convalescence, when the milk diet is no longer tolerated, and the patient returns to his customary diet. —Dr. H. Molliere in *Wien. Med. Presse; Amer. Med.-Surg. Bull.*

SURGERY.

Report of a Case of Laparotomy for Intestinal Perforation During Typhoid Fever —Recovery.—Of all the complications met with during the course of typhoid fever, intestinal perforation is undoubtedly the most fatal, so fatal is it, indeed, that it is very doubtful if any cases of true perforation, in which the intestinal contents are poured into the abdominal cavity, recover if left to nature. We find this complication occurring in all classes of cases, from the mildest to the severest, and in all stages of the disease from the first week to the period of convalescence. Still it is probable that it occurs more frequently during the third and fourth weeks of the disease, in those cases in which abdominal symptoms are marked, in adults than in children and in men than in women.

The death rate from typhoid fever is estimated at thirty per hundred thousand of population per annum, and it has been found that from five to ten per cent of this mortality is due to perforation. Fritz tabulated four thousand six hundred and eighty cases, which showed 5.58 per cent as due to this cause. In two thousand Munich autopsies perforation constituted 5.7 per cent of the causes of death. Some authors give it as high as eleven, twelve and even fifteen per cent.

Thus we have in the United States alone, more than one thousand deaths annually, as due to perforation.

In the face of such a mortality and the recognized fact that only in very rare cases might recovery take place, up to within ten years not a word was mentioned in the standard text-books of any treatment but the expectant, or what amounts to the same thing, opium and rest.

And at the present time the most recent works do not favor any operative procedure. Osler says "If perforation occur, the question of laparotomy may be discussed. If perforation has occurred in the second or third week, it would be useless under the circumstances to attempt to stitch a slit in the intestine; if, on the other hand, it occurs during convalescence, it is only right to give the patient a chance, and the operation should be performed." Pepper in his recent text-book says "It is questionable whether laparotomy is ever justifiable in typhoid fever and whether the patient's chances for life are not better without it."

With these facts before me I was asked by Dr. Schiller to see the following case.

Mr. G., age 39, of good personal and family history, having never had any serious illness till the present; was taken sick about Jan. 1, with an obscure complaint, which was diagnosed as typhoid fever of an irregular type by Dr. Schiller, who saw him first on Jan. 16. The irregularity in the temperature was thought to be due to the large quantities of so-called antipyretic drugs that he had been taking during the first two weeks of his illness. He was put on the usual treatment and progressed as an ordinary severe case of typhoid: tempera-

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ture running from 104° to 105° F. in the evening. On Jan. 27, after having passed a restless night, he was taken about 4 P M. with a very severe pain in the abdomen, which he located in the ileo-cecal region. The pain commenced during a movement of the bowels, and was much increased by a second movement which took place about an hour later. When seen by Dr. Schiller about 10 A.M. he was in a state of collapse, with the most profuse sudamina extending over his entire body. Temperature subnormal, respiration rapid and shallow, face drawn and anxious, but with a fairly good pulse. He complained of very severe pain in the abdomen which was found tender and a little swollen. In fact he had the symptoms of a typical case of perforation, and that diagnosis was accordingly made. When I first saw the patient at 2 P.M., about ten hours after the perforation had taken place, I found him in about the same condition, with the exception that the abdomen was more swollen, the recti muscles being contracted very firmly, giving the board-like feel to the abdomen. He complained of much pain, and tenderness was marked in the right iliac region, although he had had half-a-grain of morphia since 10 A.M.

I confirmed Dr. Schiller's diagnosis and gave it as my opinion that the patient would not live 24 hours if left to himself. I suggested an operation and the patient readily gave his consent, he having no friends near. The surroundings were anything but good. It was agreed that it was not best to attempt to move him to a hospital, but to operate where he was and at once. Everything was made ready and clean as possible but not aseptic, as that was impossible under the circumstances.

He was put under chloroform and the abdomen opened by a four inch incision close to the median edge of the ascending colon.

The upper part of the incision was in the luna semi lunaris and the lower part through the deeper abdominal muscles extending to within an inch and a half of Poupart's ligament. On opening the peritoneum about a pint of liquid feces flowed out. The cecum was seen at the outer edge of the wound, and the folds of the ileum on the inner side. A loop of the ileum was drawn through the wound and presented a truly remarkable appearance. The whole surface was congested but the congestion was more marked about the diseased patches which could be distinctly seen through the walls of the intestine, varying in size from mere points to large blotches an inch or more in diameter. The deeper ulcers showed more distinctly and in consequence the bowel had a mottled appearance, from the faintest point of red shading off into the surrounding tissue to an intense crimson blotch involving half the circumference of the bowel. There were from four to ten ulcers on each foot of the intestine examined, about six feet in all, from the ileo-cecal valve.

The bowels were only moderately distended. After a few moments the perforation was found. It was about a sixteenth of an inch in diameter placed on the highest point of the intestine and about two feet above the ileo-cecal valve. The contents of the intestine were exuding through the opening making it easy of recognition. It was closed by two rows of Lembert sutures which were introduced with difficulty owing to the extreme brittleness of the intestinal wall. Only with the greatest care was it possible to keep the stitches from cutting out, especially near the edge of the ulcer. Another point was found about ten inches higher up that was so near perforation—nothing but the peritoneal coat remaining—that it was thought best to introduce a row of stitches to prevent it from rupturing. The bowels were then replaced and the abdomen washed out as thoroughly as possible. A considerable quantity of white flocculent material mixed with liquid feces came away with the washing.

No attempt had been made on the part of nature to limit the extravasated fecal material. A Mikulicz drain was introduced well down into the pelvis and extending out between the folds of the intestine; and the abdomen closed with interrupted suture.

The patient was put to bed in a fairly good condition, the operation having occupied about forty minutes.

On the following morning the patient was very weak, with a rapid pulse (140) and a sub normal temperature. He was free from pain, and the abdomen was not nearly as tender as before the operation. The dressings were found much stained with bloody serum and were consequently changed. It was found necessary to change them at least once a day till after the drain was removed on the fourth day and a new one introduced, but not as deep in the pelvis, nor did it extend as far among the folds of the intestine. This was removed on the seventh day and the abdominal wound simply packed.

On the second day after the operation the temperature rose to 101° and remained above normal till the fourth day when it sank below the normal where it remained for more than a week.

His pulse varied from 112 to 120 after the second day and did not sink below one hundred until four weeks after the operation. On the fourth day his abdomen became somewhat bloated but was not markedly tender. He was given an ounce of Rochelle salts which caused several loose stools of a pea soup character, and from that time on, he had from three to a dozen loose stools during each twenty-four hours for nearly two weeks. It was during this time that the temperature remained sub normal. His tongue was brown and dry, the typical typhoid tongue.

The wound showed no reparative action till after the end of the second week. The sutures which were introduced either cut out or were removed as useless. On removal of the drain which was introduced at the time of the operation the colon could be seen at the outer edge of the wound, this soon filled up the bottom of the upper end of the incision, becoming agglutinated to the abdominal wall and completely closing the wound as far as the abdominal cavity was concerned. At the lower part of the wound the deeper muscles slid over

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one another, they being cut at different angles so as to close this part completely.

As the patient gradually grew stronger and his vital forces recovered the wound granulated and filled up from the bottom. The exposed intestine granulating the same as the muscular wall, until at the present time the wound is all but entirely healed showing no indication of hernia or other trouble. The patient has recovered his strength to a great extent and as soon as the wound is closed, which I think will take about ten days, he will be on the high road to recovery.

During the last ten years since the operation was first advocated by Lyden (May 1884) several papers have been written on the subject by Mears, Fitz, Van Hook and Abbe.

Van Hook reported nineteen cases, but in five the diagnosis was doubtful, leaving fourteen cases which he thought should be recorded. To these Abbe has added five making the statistics up to date as follows:

1884—Mikulicz, 3 cases, death.
1885—Lucke, 1 case, resection, death.
1886—Bartlett, 1 case, death.
1887—Bontecon, 1 case, death.
1887—Morton, 1 case, death.
1889—Bontecon, 1 case, death.
1889—Hahn, 2 cases, death.

—By H. A. Sifton, M.D., in Chicago *Clinical Review.*

The Radical Cure of Umbilical Hernia.—Ducas-Championiere (*Rev de Chir*) advocated at the recent French Congress of Surgery at Lyons the radical cure of umbilical and epigastric hernia. Although such treatment is not so frequently applied to these as to other forms of hernia, the indications for operation may be regarded as more urgent in the former. Umbilical hernia usually attains an enormous size, and causes much discomfort. It is never effectually retained by truss or bandage. It assists in bringing about rapid organic failure marked by diabetes, albuminuria, and premature senility, and is almost always complicated with obesity and pulmonary emphysema. When the hernia has acquired a considerable volume it is no longer amenable to operative treatment, as the swelling will very probably return through the large opening formed in the abdominal wall. In cases of small umbilical hernia, on the other hand, a solid radical cure may be effected. As umbilical hernia presents itself in many varied forms it is impossible to state absolutely the details of the operation for its radical cure. In this, as in other forms of hernia, the main objects of such treatment are to remove the sac and to secure its pedicle, and to close the orifice in the abdominal wall by sutures arranged in rows so as to establish a firm cicatrix. In most cases in which the sac is removed it is necessary to excise the umbilicus. In operating on umbilical hernia the author follows his usual custom, in practicing radical cure, of removing large masses of omentum, and thus, by reducing the tension of the abdominal wall, lessens the risk of relapse. The opening into the peritoneal cavity is closed by five rows of sutures—one for the peritoneum, one for the skin, and three for the different muscular layers. In cases of small umbilical hernia this operation, it is stated, has had excellent results. In large swellings, however, there is a constant tendency to relapse. The secret of the successful surgical treatment of umbilical hernia is never to allow the swelling to attain a large size. The extreme gravity of a large umbilical hernia with regard to the general health of the subject, the especial danger attending its strangulation, and the inevitable enlargement of the swelling should lead surgeons to propose an operation with a view to radical cure in every instance in which the swelling is still small and in an early stage. The author has operated on eighteen cases of umbilical hernia with good results, but in some of the more severe instances he had to contend with serious symptoms of pulmonary congestion. He has operated also in eleven cases of epigastric hernia. This form of hernia, unlike umbilical protrusions, has hardly any tendency to increase in size. It is usually painful, and is often accompanied by vomiting and various intestinal troubles which can not be easily accounted for. The palliative treatment of this form of hernia is not satisfactory, but the affection may be readily and effectually cured by operation. The hernial orifice should be freely incised, and the sac drawn forward, opened, detached from surrounding parts and removed, together with any omentum it may contain. The pedicle of the sac should be ligatured before division as far back as possible. The opening is then closed by three rows of sutures—one row for the skin, one for the peritoneum, and a third for the intermediate portions of the abdominal wall. In the author's practice this operation for the radical cure of epigastric hernia has never been followed by relapse.—*Brit. Med. Jour.*

Hernia of the Linea Alba.—Niechues (*Berliner Klinik*, Heft 80, February, 1895) has collected 38 recent cases of hernia of the linea alba, 11 of which, treated by Kuemmel, of Hamburg, are here recorded for the first time. This series of cases shows that the most frequent situation of hernia in the middle line of the abdominal wall is not near the ensiform process, but within an inch of the upper margin of the umbilicus. This form of rupture often follows violent muscular exertion and blows on the front of the abdomen, and occasionally rapid emaciation. In several of the cases published in this paper no distinct sac could be found at the time of operation for radical cure. Almost every patient belonged to the working classes, and of the whole number 30 were males and 8 females. In most instances hernia of the linea alba, even when it consists merely of a small protrusion of subperitoneal fat, causes pain, vomiting, colic, and other severe symptoms out of all proportion to the extent and nature of the lesion. The condition of the patient often becomes very distressing, as acute pain is usually brought on by very

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slight muscular exertion and after taking food. In some few cases those symptoms may be removed or much alleviated by the wearing of a closely-fitting vest or girdle. The use of any kind of truss supplied with a pad is to be avoided, as pressure directly applied to the seat of rupture is liable to dilate the abnormal opening in the abdominal wall, and to cause adhesive inflammation of the hernial contents. In most instances, and especially in those in which the rupture is irreducible, an operation for radical cure is indicated. The protrusion having been freely exposed, any adhesions of intestine and omentum to each other and to the neck of the sac or the margin of the ring should be carefully separated. The protruded omentum should be ligatured and removed, and the intestine carefully replaced in the abdominal cavity. Finally, the margin of the ring should be excised, and the raw edges be brought together by suture. If the hernia consist only of a protrusion of subperitoneal fat, this should be cut away. The result of this operation is as a rule very striking, and the painful symptoms cease immediately.—*British Medical Journal.*

OBSTETRICS AND GYNECOLOGY.

The Conservative Treatment of Diseases of the Uterine Appendages.—In an address before the Section of Obstetrics of the British Medical Association, as to the conditions and within what limits conservative surgery may be practiced, Dr. Pozzi, of Paris, (*Brit. Med. Jour.*) says:

When, after the operation of laparotomy in response to clinical indications, we find ourselves in presence of lesions which have profoundly disorganized the appendages, as, for instance, a pyosalpinx with abscess of the ovary, or, again, an entire cystic transformation of the ovary, and parenchymatous alteration of the Fallopian tube, it goes without saying the only thing practicable is ablation. But in many cases operators practice extirpation for less serious lesions.

Suppose the case in point to be a hydrosalpinx, with relative integrity of the ovary, simply strewed with small follicular cysts the size of a pea; or else suppose the Fallopian tube to be found intact and permeable in all its extent, while the ovary alone is found to be attacked by diffuse ovaritis, sclerosis, and micro-cystic degeneration, or containing cysts larger, but limited. Certainly in cases of this kind total extirpation may appear too radical a procedure. In point of fact, a certain quantity of normal ovarian tissue still remains, and the Fallopian tube is permeable, or susceptible of becoming so. We may then conceive the hope of preserving a part of the ovary, and restoring the functions of the oviduct in re-establishing its orifice and caliber. The first of these hopes has led to partial resection of the ovary; the second has given birth to salpingostomy, or re establishment of an artificial ostium by partial resection of the Fallopian tube.

I hasten to say that I have no faith in operations performed with the hope of restoring the functions of a diseased Fallopian tube. I believe that once having been attacked by acute inflammation it has become definitely incapable of fulfilling its physiological role. The abdominal aperture may be re-opened by detaching the agglutinent fringes, or even an artificial orifice created at the side of the normal one now obliterated, as Skutsch and Martin have done. But I believe this work to be useless, as is easily proved by the following considerations: In the first place, the caliber of the Fallopian tube, momentarily re-established by catheterism, will always have a tendency to be obliterated again; also, even were the caliber to remain fixed, it would not suffice to assure the migration of the ovules. The role of the Fallopian tube is not that of an inert duct; this tube is essentially active; the integrity of its texture, the persistence of its vibratile epithelium, and its contractile fibers are conditions indispensable to its functions. Thus an inflammation of some duration must surely destroy or definitely paralyze these active elements.

For these reasons I eliminate partial resection of the Fallopian tube from the number of conservative operations. I believe that these may be attempted only when the tube is healthy, the ostium open, and its caliber permeable. In other words, I consider partial resections justifiable for the ovary only.

I shall not be long in demonstrating that a small quantity of ovarian tissue suffices to assure the regularity of menstruation and to permit fecundity. The richness of ovules in this organ is well known; however small may be the fragment preserved, it contains thousands of germs.

In the case of partial resection of the ovary the persistence of menstruation is constantly remarked, and several observations prove that its fecundity is preserved. It remains to be determined in what cases of lesions of the ovary a partial operation may be made, and to decide the nature and technique of this operation. I would establish as a general rule that whenever the Fallopian tube is healthy, and the ovary alone diseased, we must endeavor to preserve a part, and only at the last extremity resign ourselves to a total sacrifice.

The most favorable cases are evidently those in which the diseased process has affected one region of the ovary, leaving an entire segment of the organ intact. The typical lesion, and that which can leave no doubt in regard to the persistence of the functions of the remainder of the ovary, is an isolated cyst. In these cases the operator must, in the first place, ascertain that the Fallopian tube is completely permeable by introducing a stylet through the ostium, and pushing it as far as the uterine cavity. In the second place, while the assistant holds the ovary between his fingers, the surgeon performs a resection of the diseased part by two incisions, which circumscribe a cuneiform segment. The two lips

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of the wound are reunited by the aid of a continuous suture in catgut, which guarantees simultaneously coaption and hemostasis. Should this not be complete, it can be obtained by adding a few deeper stitches. It suffices, further, to hold the ovary for a few seconds compressed in an aseptic compress to cause the cessation of the oozing due to the needle puncture.

Again, we may have recourse to the resection of a segment of the ovary in cases of microscopic degeneration, in which a zone of ovarian tissue is left intact at the hilum. An incision can be made, removing the greater part of the organ, but preserving its base, and uniting its lips with a continuous suture of catgut. Such was my method of procedure in my first operations. I have now added a complementary maneuver, the fixation of the ostium upon the ovarian stump by a few points of suture. This salpingorrhaphy is designed to prevent the Fallopian tube from falling away, so to speak, from the rest of the ovary, and contracting adhesions which would render the conservative operation useless. This suture is particularly indicated when it has been necessary to liberate the tube in tearing off adhesions capable of being reproduced.

Latterly I have modified my method, and practiced ignipuncture instead of resection. When the ovary presents dispersed lesions of small volume it is more expeditious, and doubtless more efficacious, to substitute the cautery for the sharp instrument. By the aid of touch and sight it is easy to discover all the transparent and depressible points on the surface of the organ. These small cysts are opened successively by the small knife or thermo-cautery, and burned on their inner surface. (The objection that there may be danger of causing scarred nuclei or including sclerosis are then refuted, and the author gives the results of his own practice). I have performed resection of the ovary six times and ignipuncture eight times. All my patients have recovered perfectly and rapidly from the operation. In all, either immediately or later, the pains ceased or were greatly diminished. I have had no persistent recurrence among these patients. In those in whom before this menstruation was irregular the menstrual flux has returned with greater abundance (probably due to general improvement).

Finally, one of my patients is pregnant three months. I made twelve deep points of ignipuncture in the left and eleven in the right ovary. The ovaries were white, smooth, and enlarged as the kidney in Bright's disease, and affected with diffuse ovaries. The symptoms presented by this patient before the operation were continuous pain, with severe exacerbation at the moment of menstruation. They have disappeared since the first menstruation which followed cauterization of the ovaries.

To summarize my results: Fourteen women in whom I have performed conservative operations on the ovary have all recovered from the operation; all have been completely cured or immensely improved. In each case menstruation has continued, and one has become pregnant.

Ascites From a Gynecological Point of View.—The characteristic symptoms of ascites are the following: Special configuration of the abdomen, curvature of the line limiting the dullness of sound with the concavity turned upward, fluctuation, variability of the dullness according to the patient's position, dilatation of the chest, projection of the umbilicus, separation of the rectus abdominis muscles, etc.

If the ascites is due to compression of the inferior vena cava there is edema of the abdominal parietes and genital organs, pointing then to an affection of the respiratory or circulatory organs.

If, on the other hand, the ascites is the result of compression of the portal vein, the edema mentioned above does not exist; but around the umbilicus is found a circle of dilated veins, known as the "head of Medusa." When these conditions exist they indicate an affection of the liver, kidneys, or peritoneum.

Generally it is supposed that, in a case of tuberculosis or carcinoma, the extravasation is sanguinolent; but that is only true in a small number of cases. Ordinarily the extravasation in tuberculosis or carcinoma of the peritoneum is of a serous nature.

Fibrinous peritonitis, which is a far more frequent affection than in generally admitted, gives also rise to ascites. I remember having under my care a little girl, five years old, affected with ascites the cause of which could not be determined. The child was punctured eight different times, the ascites being continually reproduced; but at the present time her health is excellent.

Is it possible to confound ascites with other morbid processes? There is no doubt of that. Andree thought he had to do with ascites extravasation in a case where the stomach was dilated to such an extent that it bulged out in the vagina. For my own part, I have made a similar mistake in examining a woman at the point of death, whose stomach was so much dilated that, by changing the patient's position, the same modifications were produced in the percussion sounds as are characteristic of an ascitic effusion.

There are also cases of intestinal distension which may be taken for ascites, an error committed by Frerichs.

Still more frequently there may be confusion between ascites and unilocular ovarian cysts. I recall having seen, in 1876, a woman who presented all the symptoms of ascites, although there was no perceptible cause for this disease. Shroeder, who examined the same patient, also concluded that it was a case of ascites; but, on making an exploratory puncture, he found that we had to do with a cyst. I have known several instances of the same kind, and whenever one meets, in a woman, with what appears to be an ascites the cause of which is at all obscure, one ought always to think of the possibility of its proving to be an ovarian cyst.

There exists a symptom which is of considerable assistance in arriving at a correct diagnosis; in a true case of ascites the fluctuation can generally be perceived in the vagina, whereas never anything of the kind occurs in cysts.

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The examination of the liquid should also be resorted to for diagnostical purposes. If this liquid becomes blue in the open air it is the product of ascites; but when the liquid, on being left to stand, immediately coagulates, it indicates a dermoid cyst.

Neither should the chemical examination be neglected, for if the liquid contains paralbumen there need be no hesitation in diagnosing an ovarian tumor.

One symptom, which never deceives, is brought out by the examination of the liquid by means of the "centrifugal" apparatus. If you have to do with a liquid of ascitic origin you always obtain a bloody spot resembling sealing wax, such liquid always containing a tinge of blood. On the other hand, I have never seen a red spot in the case of an ovarian liquid. As many times as I have repeated this experiment, it has never failed me.

Now and then ascites exists conjointly with a cystic affection, particularly when the ovaries are the seat of papillomatous degeneration.

Exploratory puncture of cysts sometimes results in making the radical operation more difficult. It is, therefore, well to abstain from this procedure, and to resort at once to laparotomy.—Prof. Litten, in *Medical Week.*

NOTES AND ITEMS

Association of American Medical Colleges—The sixth annual meeting of the Association of American Medical Colleges will occur at the Rennert, Baltimore, Md., at 2 P M., Wednesday, May 8, 1895.

Beef vs. Horseflesh.—What is termed "beef famine" is now impending in this country, simultaneously with which it is noted that hundreds of thousands of wild horses are roaming in our Western plains wasting the grazing needed for cattle (*Jour. Amer. Med. Ass'n.*). These animals have little or no market value—$2 being the highest quoted price—and yet the consumption of horseflesh is increasing so rapidly in Europe that worn out horses for which butchers formerly paid only from $5 to $10 are now worth $45 to $50. Mr. E W. Tingle, United States Consul at Brunswick, Germany, sees here a great opportunity for American packers. Upward of 20,000 horses are annually slaughtered for sausage meat in the Paris abattoirs alone. These animals are carefully examined by competent veterinary and only absolutely healthy ones are accepted. The chevaline, or horse sausage, has become so popular that the Commite d' Hygiene of Paris has been appealed to, to discriminate against its sale by some form of label. The Commite has adopted a method devised by two German chemists, MM. Edelmann and Brautigan, of distinguishing between the chevaline and ordinary sausage. This consists in adding to a bouillon of the sausage meat, acidulated with a 5 per cent. solution of commercial nitric acid, a few drops of iodized water or Gram's solution, which are allowed to flow down the sides of the tube containing the bouillon. With the horse bouillon there is formed a violet-red-brown ring, which is not developed in veal, beef, mutton, pork, dog or chicken bouillon. As determined by this test, all horse sausages will be henceforth labeled accordingly, but it is not believed that the label will diminish the popularity of the chevaline. The proper place for its manufacture is, however, as Dr. Tingle might have suggested, in our Western States where wild horses multiply so radidly that stallions are declared to be *feræ naturæ* and may be shot down on sight.

The Late Dr. Alfred L. Loomis.—At a stated meeting of the New York Academy of Medicine held on Thursday evening, April 4, 1895, the following resolutions were passed:

WHEREAS, Our associate and former president, Alfred L. Loomis, M.D., LL.D., has been removed from us by death. Therefore be it

Resolved, That in the death of this distinguished man the profession of medicine has lost one of its ablest teachers, one of its wisest leaders, and that the Academy of Medicine has lost a fellow who contributed largely to its present prosperity; for, at a time when it had become important that a new site should be secured, it was greatly through the courage and enterprise of Dr. Loomis that this was accomplished and the present large and sufficient building erected.

Resolved, That in view of the position occupied by Dr. Loomis in relation to this Academy it is recommended that a memorial meeting be held in the hall of the Academy on the first Thursday in May, and that the President be requested to invite representative speakers, and take such further action as he may deem appropriate.

Resolved, That a copy of these resolutions be sent to the family of Dr. Loomis, and that they be published in the secular and medical press.

[Signed] WILLIAM M. POLK, Chairman, FRANCIS DELAFIELD, ANDREW H. SMITH. } Committee.

The Court's Opinion of Insane Delusions.—Until human nature radically changes, there will probably always be those who will seek some scapegoat for their crimes. At one time it may be one thing, and on another occasion something quite different. This explains much of the talk about irresistible impulse, hypnotism, insane delusions, and the like. In this connection, one of the most interesting of recent legal decisions is that of the Supreme Court of Tennessee in the case of Wilcox v. State, rendered Nov. 12, 1894. This was an appeal from a conviction of murder in the second degree. The defense relied on was the insanity of the defendant at the time of the homicide, it being insisted that the act was the result of an insane delusion upon

his part, rather than a general derangement of his entire mental faculties upon matters generally. It was contended that when he did the killing he was suffering from the insane delusion that the deceased had been on too intimate terms with his wife. He had been addicted to the excessive use of morphin and cocain, taking the drugs in doses sufficient to kill twenty men not addicted to their use, at a single dose; and he had carried on this habit for years, and had grown rapidly more and more addicted to their use, and come more and more under their influence. Many witnesses were examined, both experts and non experts, in regard to his mental condition. It appeared that he was at one time a man of good mental capacity, described by many of the witnesses as an exceptionally bright man, that he was an active business man, had studied and practiced medicine with success, and was regarded universally as a man competent to attend to his business affairs. He was also shown to have been an arbitrary dictatorial man, of strong will power, and from his boyhood of quick, active, irritable temper. It was strongly pressed upon the court that many of his arbitrary and dictatorial acts were evidences, and the result, of his mental unsoundness and the strong hold which the drugs had obtained over his actions, and that the evidence presented a case of insane delusion, on account of which the verdict should not be upheld. But the court holds otherwise. Its answer is that in criminal cases the correct issue is not that of sanity, but of responsibility. The delusions of a sane man do not make him irresponsible. The question is in such cases, is the delusion set up as a defense the delusion of an insane person? Many men of strong minds, continues the court, have delusions. Remarkable instances are given in the works on medical jurisprudence of delusions in men of prominence in all the walks of life. Lord Kenyon had an unreasoning fear of poverty, and so did Lord Stowell, although he was a man of immense fortune, his home being absolutely destitute of the necessities and comforts of life. Lord Erskine would never sit at a table or remain in a company as one of thirteen persons. Lord Eldon, after he had made up his mind and expressed his opinion lucidly and conclusively, was at all times a prey to grave doubts of his correctness. Lord Brougham, upon more than one occasion, was placed in seclusion, his mind being clearly off balance. Judge Breckenridge, of Pennsylvania, is reported to have on a hot day, while holding court at Sunbury, gradually taken off his clothes, until he sat naked on the bench. Judge Baldwin of the United States Supreme Court, was a hypochondriac. A distinguished New England judge imagined that a dropsical affection under which which he labored was a sort of pregnancy. And yet none of these men were insane, because they had reason and sanity enough to conquer and overcome these delusions. A familiar illustration is that of the Mormon elders, who claimed that they had a direct revelation from heaven permitting them to practice and teach polygamy. The world generally regards this as a rank heresy, and the claim to be the evidence of an unreasonable delusion. It has, however, been held that they can not defend on the ground of such delusion, inasmuch as otherwise they are sane, shrewd, active, successful, and unusually practical men in their business and social relations, and they have been held responsible for such delusions. Nor can it be that the jealous suspicions which so many men entertain without any foundation can be magnified into insane delusions, which will exempt them from punishment for crimes originating in such jealousy. In a sense, all unfounded suspicions are delusions, but they do not for that reason excuse crime.

The rule is tersely stated in Archbold's "Criminal Practice and Pleading" as follows: "The insanity must have been of such a kind as entirely to deprive the prisoner of the use of reason, as applied to the act in question, and the knowledge that he was doing wrong in committing it. If, though somewhat deranged, he is able to distinguish right from wrong in his own case, and to know that he was doing wrong in the act which he committed, he is liable to the full punishment of his criminal acts."

Moreover, the court makes the point that the insanity set up as a defense in this case was not hereditary or natural, but voluntary, in the sense of having originated from the use of drugs. While this is an unfortunate and unhappy condition, the law, it says, does not and can not regard it with the same leniency that it does cases of adventitious insanity, not caused by the act of the party himself. Parties who persist in subjecting themselves to the persistent use and habit of taking alcoholic drink or other poisonous compounds and drugs can not expect the same forbearance and immunity from punishment as those bereft of reason by the act of God. Still it is admissible and proper to show the immoderate use of drugs or whisky, not to excuse crime, but to illustrate the mental conditiod, with a view to fixing the degree of the crime as it depends upon deliberation and cool malicious purpose.

Co-Operative Medicine, or Lodge Practice.—Dr. James Samson, in a paper read before the Windsor (Ontario) Medical Association, says (*Medical Age*): This paper is simply a few plain, cold blooded observations in reference to a malignant pustule that has during the present generation planted itself on the body of the medical profession, with results such as always follow the history of malignancy.

The medical profession has long enjoyed the dignity of standing in the very forefront of respectability among the educational organizations of the world; and it has, we all believe, honestly deserved this recognition—first, from the high standard of its attainments; second, from the tremendous interests involved in its pursuits; and lastly, from the fidelity and honorable energy with which its disciples have in all modern days dedicated their best energies to the duties of their chosen vocation. And all of this dignity has been but an accumulation of the individual worth of the members of the

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profession. That this condition of affairs shall always continue, is a "consummation devoutly to be wished," both for ourselves and in the interests of those whose destines are largely in our hands. So literally is this true, that no wiser injunction could be impressed on him who passes through the portals of admission to the profession than to remember that his dignity and self respect will win him half the power and usefulness he shall ever possess, and that the great public to whom he goes will ever respect him most who most respects himself. And so I believe that he who peddles his profession prostitutes it, and pays for his crime the inevitable price that prostitution has always paid, both in his own personal humiliation and in the degradation that his debauchery brings on the craft which he represents.

It was no honorable motive that first inspired the damnable heresy of co-operative medicine, nor has any one ever claimed that it was even a humane impulse that fathered this ill-begotten innovation. Almost every so-called benevolent organization known among the sons of men in our day had a bastard birth: and under the hypocritical guise of Christian charity was chartered and founded to fill some man's pockets or the measure of his ambition. And as all men in their average daily conduct seem so prone to value their money more than their lives, the audacious scheme was concocted of offering them the bonus of gratuitous medical attendance as a special inducement among all the others. And so the profession that has always done and always will do, to the very verge of eternity, more for charity's sake than all others, was asked to add a halo of respectability to this scheme of modern philanthropy, to accept all men as paupers, to care for them in sickness and distress at the ordinary rate paid by all other corporations for all other paupers—a rate which, by the way, has always been considerably less than the average horse-breeder would gladly pay a veterinary surgeon for the care of as many average horses.

And so doctors in hundreds and thousands, with a strange fascination for that which promises money on the spot, have taken the thirty pieces of silver and made themselves part and parcel of the scheme. Some enlisted because poverty suggested the crime, some because of the promise of a possible inroad into homes to which they might otherwise for a long time and perhaps forever remain strangers. Artifice was thus employed as an accession to brains. Some enlisted from an easy-going thoughtlessness as to the "true inwardness" and inevitable tendency of the ill-shapen scheme, and some from that wasted love of charity that so strangely seems to flourish in some doctors in proportion as they themselves grow hungrier. Charity forsooth!—a charity unique in that it curses both him that gives and him that receives.

And so it goes on, and the man who possesses houses and lands and stocks in the bank, and a mortgage on the physician's home, can command his services and claim his professional bondage for a year, for the same money he would pay a dog-healer for the inspection of a hound with the mange. And the hireling going from door to door gathering mites from the rich and the poor, no greater than the umbrella-mender gets, and with more feeling of contempt for himself than his fellow-practitioners have for him, slowly and quietly ousts the old family physician out of the home and little by little makes of him an enemy. Or he sees the sick man recover, and himself dismissed with as little ceremony as a beggar, and the day after sees another carriage at the door and another doctor caring for the family, and his own humiliation increased. Or he finds that the man who pays like a pauper commands like a king, and wants as much attention paid to a carbuncle as would be given to a garrison poisoned with cholera. And he comes, and he comes again and again, and goes into the house half-sneaking, and comes out of it cursing the contract that gave him a pittance to put himself under obligations and be a slave to an unreasonable hog. And then he himself is sick of it all, and knows as he lives that there is no enjoyment or satisfaction and but little present or prospective profit in it, that there never was one righteous reason why he should have enlisted in the work, and that the entire system is a crime against the dignity and harmony and prosperity of the profession. And when the patient is really sick, and growing sicker every hour, the prospect of a consultation with the family physician convinces him that here is a situation which no schedule of lodge fees ever yet fully provided for. And when the grass is green over the grave of his patient, and the widow and the heirs and administrators of the deceased have closed out the whole edition of their versions of the cause of death, and the annual meeting of the lodge has come around again and a "put up" vote has put another physician in charge, it is then he (the doctor I have been writing of) goes to his home in the dark and swears that Scugog Lodge No. 784 will see his face no more forever—he swears it alone, where none may hear and wonder whether his motives were manly or mercenary when he first stood at the door of Scugog 784 praying so earnestly for admission to all its rites and ceremonies.

I need not linger long on the moral of it all. That man is now, and ever was and ever will be, the best member of any profession who himself most highly esteems his membership. The physician who has learned to place a low estimate on the value of his services will learn sooner or later that no one else's estimate is higher than his own. Charity should be charity, pure and simple and undefiled, and all else should be business and business only. His most steadfast and abiding friends will be those whom he has won by the most dignified, most manly, most skillful display of his real work; and his own individual pride in his profession, and his personal standing among his fellows, will some day appear to him as they really are, *matters of intense importance.*

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ORIGINAL ARTICLES

Teratoma.

BY W. H. MAYFIELD, M.D.,

Chief Surgeon Baptist Sanitarium, St. Louis, Mo.

Read before the St. Louis Medical Society, April 6, 1895.

Warren says: The ovary at times contains cysts, which are, either in part or wholly, made up of dermoid structures. These cysts may contain only dermal structures, or a great variety of tissues may be found in them, such as bone, teeth, cartilage, muscle, mucous membrane, glands, nerves, etc. Tumors of the latter class are called "teratoma."

The commonest forms are the dermoid cysts and the simpler forms of teratoma. They are usually found on one side, but they may occur simultaneously in both ovaries. They are usually smaller than the adeno cystoma, growing not larger than an apple at first, but they may occasionally reach the size of a man's fist or head. Several varieties can be recognized, according to the more or less complicated nature of their construction. The epidermoid cyst has a wall of connective tissue lined with epidermis, but it possesses no other attribute of the skin. The contents in this case are, distinctly, epidermic scales, which may be rolled up in firm masses, or are more or less soft or soapy in appearance (Orth). The commoner form is the dermoid cyst. In this form of cyst the wall is made up of skin, containing small and ill-defined papillæ, but rich in hair follicles and sebaceous glands. Even the erector pili muscle and the sudoriparous gland are often found. The hair is partly free and partly rolled up into thick balls, or it is still attached to the walls. A large mass of sebaceous material is also found in these cysts.

The simpler forms of teratoma are dermoid cysts containing bone and teeth. The bone appears as a series of plates in the wall of the cyst, giving to the touch the feel of an infant's head. The teeth, which are not always well formed, are arranged without order. The complicated teratoma may contain, in addition to the above mentioned structures, cartilage and glands, such as mucous and salivary glands, mucous membrane with cylinder or ciliated epithelium, smooth and striped muscular fibre, nerves and cerebral substance, portions of eyes, fingers with nails, mammæ, etc. It is probable that these and more complicated forms of cystic growths have the same origin as the cysto-adenoma of the ovary and they result from the activity of the germinal cells (Orth).

The growth of the dermoid cysts is slow, and they are generally first observed at the period of puberty, although not infrequently found in young children. Combinations of dermoid cysts with adenoma cystoma are occasionally observed. Thompson reports a case of dermoid cyst of the bladder containing hair, which cyst he removed. It was a pedunculated growth, and it was undoubtedly vesical, and not expelled from some ovarian source through the urinary passages, as sometimes occurs.

Dermoid cysts are found also in regions of the body quite remote from the ovary. The so-called "orbital wens," are true inclusion of skin of a congenital origin, as are also some of the cysts of the neck. Some of the cysts in the latter region are due to imperfect closure of the branchial clefts, and they have been called by Senn "branchial cysts." This author recognizes (1) mucous cysts; (2) atheromatous cysts; (3) serous cysts, and (4) hemato-cysts.

Wagner, General Pathology, 1876.

In the dermoid tumors, situated at a distance from the skin, the closing of the abdominal cavity during fetal life becomes a matter for consideration.

The occurrence of dermoid tumors in the ovary can be explained by this, that the primitive ducts of the renal and sexual organs are not, as has been assumed hitherto, derived from the middle, but from the upper germinal layer. According to Waldeyer, these cysts are formed similarly with those mentioned above, but the new formed epithelium assumes an epidermoidal character.

Garrigues, Diseases of Women.

Dermoid cysts differ from all those hitherto described, both as to sac and contents. While in other kinds of cysts the inner surface reminds one of the mucous membrane of the intestinal canal, in the dermoid variety it is like the skin, not only in general appearance, but in regard to the elements that enter into its composition. Thus, the inside is covered with a thick layer of strati-

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fied epidermal cells, the most superficial are flat and without nuclei, the deeper round or polyhedral. Outside of this comes a layer of derma, then one of subcutaneous adipose tissue, and, finally, a layer of fibrous connective tissue corresponding to the outer layer of the ovarian cysts. The derma is often raised in more regular papillæ. It may contain sudoriferous glands, with ducts opening on the inner surface, or sebaceous glands opening into a sheath of hairs. Such hairs often spring from a small prominence and may form a switch several feet long, rolled up like a ball and usually of a reddish yellow color. In other places may be seen teeth, often in a large number (up to three hundred have been found in one cyst), sometimes several teeth together inserted in one piece of bone. Even a kind of shedding may go on, a tooth with a decaying root sitting over a healthy one, just as in the mouth the milk teeth are eroded and thrown off by the permanent teeth. If there are many teeth the bicuspid form predominates. If there are only a few, they are generally like the incisors or canine.

Besides these attributes of the skin, many other tissues or organs have been found in the wall of dermoid cysts; bones (usually of the flat type), cartilage, striped and plain muscular fibre, grey brain matter, nerves going to the teeth, mucous membrane like that of the intestine, a body like that of the sub-maxillary gland, a breast of papillæ, metacarpus with articulations, trachea, heart with mitral valve and chordæ tendinæ, and even an eye.

The outer surface of a dermoid cyst is, as a rule, of a dull grey or greenish color, with orange ichorous patches.

Dermoid cysts are small or of medium size, rarely exceeding the size of the fist of the adult. Commonly, only one ovary is affected, but the occurrence of the disease on both sides is not rare. Two or three dermoid cysts may develop in the same ovary. In the course of time, where the separate cysts grow, the partitions between them are absorbed, and they are blended into one.

A dermoid cyst may form adhesions and rupture into another organ or on the surface of the body. If it opens into the bladder, hairs may be eliminated with the urine. (Pilimiation). Dermoid cysts may give rise to metastasis in the shape of small yellow nodules on the peritoneum, of characteristic composition.

A dermoid cyst in one ovary may be combined with a proliferous myxo cystoma in the other. In the same ovary some compartments of a cyst may have a dermoid, and others a myxoid type. Nay, the two kinds may be represented in one and the same small secondary cyst.

Contents of Dermoid Cysts.—The fluid contained in dermoid cysts is characterized by its richness in fatty globules and cholesterin. It may be so thick that it hardly can pass through a canula, and it solidifies as soon as it is exposed to the air. It often contains lumps of solid fat, and in a few cases this has been found in the shape of a large number of balls of the same size and as round as billiard-balls. This fluid has a nauseating odor. It does not give the reaction of paralbumin. It contains cholesterin, urea, oxalic acid, leucin, tyrosin and xanthin.

Dermoid cysts are much rarer than proliferous cysts, less than four per cent of ovarian tumors being of this type. Before puberty, however, this is the predominating type. Frequently its appearance is combined with an imperfect development of the genitals.

Similar cysts have been found in other parts of the body, such as the head, the neck, the sacrum, the pit of the stomach, the perineum, the testicle, the uterus, the organ of the chest, other abdominal organs, etc.; but they are more frequent in the ovary than anywhere else.

American Text-Book of Gynecology.

These growths may appear at any age. They have been found in children at birth and in women at ninety years. A tumor removed from a girl when she was eleven years old was noticed when she was but eight years of age. It involved both ovaries and the fundus was imbedded in the mass. The neck of the uterus was made to form a pedicle. The tumor contained a large quantity of sebaceous material, hair, bone, teeth, and at one point a mass resembling one side of the upper jaw covered with mucous membrane and containing a row of teeth.

A dermoid cyst was removed from a woman aged forty-four years, who had given birth to six children. It contained hair and sebaceous material. Cullingworth reports the case of a woman, in whom both ovaries were apparently involved by dermoid, who had given birth to twelve children and had had three miscarriages, the last three months before the removal of the growth.

Skene, Diseases of Women, 1890, Dermoid Cysts.

The characteristics of this tumor differ very markedly from those already described. The origin of this cyst is peculiar, and this may account for the fact that its contents are made up of specimens of most tissues of the body; hair, bone, teeth, and adipose tissue usually in the greatest abundance.

Dr. A. B. Maufield, Surgeon-in-Chief of the Saline Sanitarium, Salina, Kanas, reports the following case:

Pearl Abbot, age eight years and ten months, in November, 1893; born in Kansas; English descent; health at this time very good; first symptoms of tumor, February, 1893.

First saw patient in July, 1893; diagnosis of other physicians, various; none diagnosticated it as a tumor. My own diagnosis was that of multilocular dermoid cyst; and I further predicted the presence in the tumor of hair, bones and teeth.

Operated on November 25, 1893. My assistants were Drs. Crawley, Brown and Dewees, of this city, and Dr. Thompson, of New Cambria, Salina Co., and Dr. M. H. Alderson, of Wilson, Elsworth Co., Kansas.

Patient became conscious immediately after the operation and called for her mother. Pulse 135 after operation Strychnia nitrate and morphia sulphate injected hypodermatically. Pulse became normal. Used

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one-sixteenth of a grain of strychnia every four hours. Rested well. Took nourishment. Removed drainage same night, 9 P.M.; no hemorrhage. She suffered no pain at all. Wound healed in five days without any suppuration. Used silk worm gut sutures which were passed entirely through the abdominal wall, and were removed on the tenth day.

Patient dismissed and went home in a carriage on thirteenth day after the operation; well. Tumor and fluid when taken away weighed sixteen pounds.

Patient continues well and hearty; is attending school and is growing rapidly. Present weight of patient 70 pounds.

Oculist's Statement.

The distinguishing features of this anomaly, calling attention to and giving evidence of a rudimentary eye, were, first, a small irregular discoloration which, upon investigation, proved to be something resembling an iris, light grey in color. This was readily determined when it was found that this pigmented tissue formed the surface of a small sac. This sac contained liquid quite similar to that of other parts of the tumor, yet possibly more transparent. The pigmentation was limited to the inner coat of the sac, and was much more marked at the point which first called attention to it.

I was unable to determine more than one chamber, yet it was plainly visible that there was an effort at the production of corneal tissue. This corneal tissue was small in area, possibly not more than one inch square surface, the pigment being more marked at its center. At the margin of this spot, at but one side, there was a streak of more dense fibrous tissue, an effort, possibly, to establish other definite formations. I could not discover any definite formations of blood vessels which differed from those of other parts of the tumor.

M. J. Brown, M.D.

Analysis of the different parts of this tumor will soon be complete.

A Clinical Report on the Value of Behring's Serum as a Prophylactic and Curative Agent in Diphtheria.

BY WILLIAM W. GRAVES, M D., ST. LOUIS

Read before the St. Louis Medical Society, April 6, 1895.

Mr. President and Gentlemen.—I desire to make a clinical report on the value of Behring's serum as a prophylactic and curative agent in diphtheria, having recently had the opportunity to test this remedy from both standpoints in one family, consisting of two adults and six children, living in crowded quarters, breathing the same atmosphere and surrounded by the same conditions.

First.—As to the surroundings, sanitary condition of house, family history and predisposition.

The home of this family is in three rooms, in the second story in the rear of a crowded tenement yard, in a densely populated district in this city. The house has an eastern and western exposure, and is surrounded on all sides by buildings which extend high above the sleeping apartments. There is a harness shop in front, between which and the house is a paved court, measuring 25 x 25 feet. In this court, and just beneath the stairway which leads to the home of the family, are four closets, used by six families, and just behind the closets and beneath the side windows of the residence stands a large garbage box used in common by the families in the yard. The odors from the closets and from decaying vegetable matter in the garbage box rise and pollute the surrounding atmosphere. In the rear of the house is a dirty alley, across which stand other houses, which cut off, excepting for a short time in the afternoon, the rays of sunlight from the West. On one side, eight feet distant, is a cooper shop towering high above the sleeping apartments of the family. The odors from this shop are, I am told, at times unbearable. On the other side and adjoining stands a house similar to the residence in question. So closely is this domicile surrounded on all sides by buildings, that direct sunlight enters there only for about one hour, mornings and evenings.

The family live in three rooms, measuring 8 x 12, 10 x 12 and 12 x 15 feet respectively, with eight foot ceilings; representing a breathing space of 3,000 cubic feet, including space occupied by furniture and eight individuals, which is but little more than sufficient for one adult.

No provision has ever been made for ventilation, except when a door or window was opened In all there are six openings to these three rooms, five windows and one door; two windows in room facing alley, one window and a door in roon facing cooper shop, and two windows in room facing court. There is one hydrant and waste pipe in this house situated in the smallest room or kitchen. The waste pipe, until six weeks before onset of diphtheria, had not been provided with a trap, before which time, the father tells me, there had been a constant stench arising from the sewer and permeating the rooms.

Amid these surroundings lived this family which consisted of eight members; father aged 34, mother aged 32 and six children, ranging in age from 17 months to 9 years. The family history is negative, both families having come from long-lived ancestors. The father is of German, the mother of Irish parentage. The father presents history and some evidence at present of a former leutic infection, and the appearance of the children is in accordance with this belief; especially the two eldest, both being more puny and weakly than the others, with notched teeth, enlarged glands and a history of frequent attacks of indigestion and catarrhal inflammations of throat and air passage. All the children, from the eldest to the youngest, are of well-marked strumous diathesis, all having hypertrophied tonsils, enlarged

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lymph glands, and a perfectly healthy appearing throat was not found among them.

The parents are in fairly good health, but both show the effects of living in a vitiated atmosphere, manifested by nasal and pharyngeal catarrh. Ignoring the belief that the father had ever had a leutic infection, and assuming the position that both parents were of exceptionally good health at their marriage, it is too much to expect that their children, though free from all hereditary taint at birth, would remain in a healthy condition, reared, as they were, amid such unsanitary surroundings. We would therefore expect to find these children in a poor state of health, sickly appearing, puny, weakly and with feeble powers of resistance. Hence, in this family the constitutional and local conditions present, together with the unhygienic environments, afforded the proper soil and conditions for the growth and propagation of pathogenic micro-organisms, particularly the bacillus diphtheria.

Case I.—Grace M., aged 7½ years, was brought to my office at 2 P.M., March 2, complaining of headache, tired feeling, loss of appetite and sore throat. Mother states that the child has not appeared well for two or three days. Temperature 101°, pulse 114. Examination revealed diffuse faucial redness with disseminated grayish-white patches over both tonsils. Patches were removed with difficulty, leaving bleeding surface. Cervical glands enlarged and painful upon pressure.

A cover-glass preparation was made at once which revealed numerous diphtheria bacilli, also staphylo- and strepto-cocci. Probable diagnosis, true diphtheria.

Not having Behring's serum on hand, I ordered a mixture of bi-chloride and iron.

March 3, 2 P.M.; patient had been restless during the night and swallowing was more painful than it was yesterday. Examination showed that the exudate had coalesced and had extended to the greater portion of both tonsils and beginning on the pharynx. Temperature 120°, pulse 120.

Being more certain, clinically, that the case in hand was true diphtheria, I gave at once 8 c.c. Behring's serum No. 2, which I had obtained from Holecamp, Grady Moore Instrument Company, and at the same visit inoculated a St. Louis Health Department culture tube. At 12 o'clock the next day, March 4, I received a report from the Health Department that the microscopic examination of the culture revealed diphtheria bacilli in large numbers, thus confirming the clinical diagnosis.

No medicine whatever was given to the patient after the injection, save 4 or 5 Pasteurine tablets daily. The diet consisted in easily digestible and non irritating food; such as Mellin's food with sterilized milk, meat broths, etc., given at regular intervals.

March 4, 10 A.M.; eighteen hours after injection, temperature 99.5, pulse 100. Patient had slept well during the night. Exudate has entirely disappeared from pharynx and left tonsil, only a slight patch remaining on right tonsil. Faucial redness fading. Patient has appetite and objects to confinement in bed.

March 5, 50 hours after injection. Temperature and pulse normal. Swelling and redness of throat greatly diminished; only a small patch remains on right tonsil.

March 6, 72 hours after injection. There no longer remains any microscopical evidence of the disease. Faucial mucous membrane has reached its normal hue. The lymph glands are somewhat enlarged but no longer painful to pressure, and, aside from weakness, patient acts and appears to be in her usual state of health.

On receiving report from Health Department of the true nature of the disease, and realizing my inability to properly isolate my patient in her present surroundings, I became fearful on this account and the conditions before stated, that several, if not all of the children, would probably contract the disease. I at once obtained the consent of the parents to permit the administration of immunizing doses of antitoxine to the seven remaning members of the family, none of whom at that time presented the slightest evidence of the disease. Between 3 and 4 P.M., March 4, I administered Behring's serum in the following prophylactic doses:

Father, aged 34,	5 c.c., No. 2.
Mother, aged 32,	5 c.c., No. 2.
Willie, aged 9,	3 c.c., No. 1.
Kittie, aged 6½,	3 c.c., No. 1.
Nellie, aged 4½,	3 c.c., No. 1.
Robert, aged 2 years and 10 months,	2 c.c., No. 1.
Jessie, aged 17 months,	2 c.c., No. 1.

No local or general reaction followed the injection in any case. Daily visits were made, and at each visit careful inquiry was made of the mother, and a careful examination of the throat of each member of the family. No evidence of diphtheria was observed in any member of the family until ten days after the prophylactic injection.

Case II.—Upon making my routine examination on March 14, I observed in Kittie, aged 6½ years, general redness of the fauces with several pin-head exudations on both tonsils. Cervical glands slightly enlarged, though not painful. Temperature 101.5°, pulse 120. No pain in swallowing, appetite good and patient, as far as external appearances go, seemed to be in her usual state of health.

Inoculated Health Department culture tube at once, and made cover-glass preparation which revealed numerous diphtheria bacilli and cocci. From the known exposure to diphtheria and the microscopical examination, and being somewhat uncertain as to the efficacy of antitoxine as a prophylactic agent, I administered, at 4 o'clock of the same day, 10 c.c. Behring's serum, No. 2. Received report from Health Department at 2 P.M., March 15, confirming previous diagnosis.

March 15, 4 P.M., 24 hours after injection. Temperature and pulse normal; patches had entirely disappeared, only slight redness remaining. From this time no symptom, either constitutional or local, was observed which

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would indicate that this patient had ever had diphtheria.

Case III.—Nellie, aged 4½ years, at 4.30 P.M., March 16, 12 days after prophylactic injection, I observed diffused redness of the fauces and at the upper margin of the right tonsil a small grayish-white patch which, when removed with swab, left a bleeding surface. Temperature 101; pulse 120. Patient is playful and complains of no discomfort whatever.

March 17, 11.30 A.M. Fauces not as red as yesterday; no new patches are apparent, nor has exudate re-formed on spot from which patch was removed on previous visit. Temperature 99.8°, pulse 100.

At this visit a culture tube was inoculated from the inflamed area, and at 12.30 P.M., March 18, Health Department reported the case true diphtheria.

March 18, 4 P M. Temperature and pulse normal; redness has almost entirely disappeared and there is no sign of any present or previous illness. In this case no serum was injected after the immunizing dose and no medicines whatever given, excepting several Pasteurine tablets daily. Indeed, when we consider the exceedingly mild symptoms in case No. III, and its subsequent behavior, without additional anti-toxine, I feel warranted in the belief that case No. II would have had a similar termination had no curative injection been given.

No other case of diphtheria has, up to the present time, developed in this family. No sequelæ have become manifest, either from the effects of the disease or from the injections; and I may here remark that the entire family appear healthier than before the advent of diphtheria at their home. This fact may be due to the better ventilation which I tried to establish, and in part, perhaps, to the tonic effects of the serum. In order to determine the prophylactic powers of antitoxine more fully, I, on March 20, sixteen days after the administration of the immunizing doses, inoculated five culture tubes from the throats of the remaining members of the family, father, mother and three children, and herewith present the bacteriological report of the examination of these tubes, as well as of the cultures in cases 1, 2 and 3, made by Dr. Ravold, Consulting Bacteriologist, to the St. Louis Health Department.

Record from Bacteriological Laboratory—Health Departmlnt.

March 4, Gracie M., 7½ years. Microscopical examination; true diphtheria. Bacillus diphtheriæ, with staphylo cocci, strepto cocci and a short bacillus.

March 15, Kittie M., 6½ years. True diphtheria. Bacillus diphtheriæ, staphylo-cocci and a few chains of strepto-cocci.

March 18, Nellie M., 4½ years. True diphtheria. Bacillus diphtheria with staphylo-cocci, strepto-cocci and a short bacillus which liquifies the medium.

In order to determine the length of time the bacillus diphtheria remained in the throats of the three preceding cases, Health Department culture tubes were inoculated on April 1, and the following is taken from Health Department records:

April 2, Gracie M., second culture. True diphtheria. Bacillus diphtheria still present in small numbers, many kind of bacteria, especially micro-cocci.

April 2, Kittie M , second culture; not diphtheria; many kinds of bacteria, especially staphylo and strepto cocci.

April 2, Nellie M., second culture. True diphtheria. Bacillus diphtheria still present, few in numbers, however; many other kinds of bacteria.

The bacteriological examination of the second culture showed absence of bacillus diphtheria in case II, 15 days after convalescence; while in cases I and III, the bacillus diphtheria was present 25 and 13 days respectively, after convalescence had been established. This examination emphasizes the fact that cases I and III, for 25 and 13 days respectively, were dangerous members of the community, and that they should have been isolated until the time when, after repeated bacteriologic examinations, the absence of the bacillus diphtheria had been demonstrated.

It may be safely said that there is no way clinically of determining the exact time that a diphtheria patient is no longer capable of transmitting the disease, and in order to determine this fact, cultures should be made from time to time in every case of diphtheria. After convalescence is established, such a case should be isolated until the patient is no longer capable of communicating the disease to others, and this may be determined only by bacteriologic examination.

The following is taken from the health department records, showing the result of the bacteriological examination of the cultures of the five tubes which were inoculated from the five remaining members of the family, none of whom at any time showed the slightest symptoms of diphtheria.

March 21. No. I. W. M., 34 years, not diphtheria. No further record of this case, but as far as Dr. Ravold could remember, there were a number of bacteria present, principally staphylo cocci.

No. II. Mary M., 32 years. True diphtheria. Bacillus diphtheria with staphylo-cocci, strepto-cocci and a short bacillus that liquifies the medium.

No. III. Willie M., 9 years. True diphtheria. Bacillus diphtheria with staphylo-cocci, strepto cocci and yeast cells.

No. IV. Robert M., 2 years and 10 months. True diphtheria. Bacillus diphtheria, a few bacilli that resemble bacillus diphtheria closely, staphylo-cocci, strepto-cocci and a large diplo-coccus that forms occasional chains.

No. V. Jessie M., 17 months. True diphtheria. Bacillus diphtheria with staphylo-cocci, strepto-cocci and short bacillus.

In order to determine the virulency of the baccillus found in these cases, Dr. Ravold kindly undertook the task, and the following is his report:

Copy.—Culture tube No. 250, from Mrs. Mary M..

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and No. 253, from Jessie M., aged 17 months, sent to this laboratory by you, March 20, were plated in agar-agar in the bacteriological laboratory of the St. Louis Medical College.

March 22 No. 250 showed, in 24 hours, characteristic colonies growing among colonies of other bacteria, but hard to separate; while No. 253 showed a number of isolated colonies that were easily picked up and sown on agar-agar. The growth on agar was found to be pure, and an alkaline 1% peptone broth inoculated with it on March 31, at 5 P.M., was placed in the incubator at 37° C. On April 2, at 5 P.M., when 48 hours old, 1c.c of the broth was injected sub-cutaneously into a strong healthy guinea pig, weighing 510 grammes. Within 24 hours the pig was very sick and died to day between 4 and 5 P.M., 46 to 47 hours after inoculation.

At the site of injection and for some distance around it there is edema; outside of that some induration; for want of time I did not dissect the animal.

I feel confident that the guinea pig died of diphtheria. The bacillus from case No. 253 is, therefore, *fully virulent.*

From the Health Department records and Dr. Ravold's report, it is seen that in six individuals out of seven exposed to case No. I.—the probable source of infection—the bacillus diphtheria was demonstrated; and that the bacillus was virulent, as proven by animal experimentation, with broth cultures of the germs obtained from the throat of the immunized 17 months old baby. The probable reason why the bacillus diphtheria was not found in one member of the family, lies in the fact that the individual (the father) was at home only at meal time and at night, and that he refrained from handling the children.

The effect of Behring's serum as a curative agent is shown in case No. I, manifested by rapid reduction in temperature and pulse rate, immediate amelioration of all symptoms believed to be due to the toxines of the bacillus diphtheria, a sudden checking of the diphtheritic process and a rapid exfoliation of the pre existing membrane.

The prophylactic power of Behring's serum is shown in cases II and III. In them the disease was rendered so mild that the patients themselves made no complaint, and the disease would not have been recognized had not daily examinations of the throat been made. In these cases only a few small patches were observed on tonsils, with slight rise in temperature of not longer than 48 hours duration.

The complete immunizing power is shown in four members of the family: mother, 32; Willie 9; Robert, 2 years and 10 months and Jessie, 17 months. In them, not the slightest manifestation of the disease has been observable at any time, though all having the local conditions favorable for its development. The bacillus diphtheria, though present, remained inocuous.

From my experience in this family, and in other cases which will be reported at some future time, I feel warranted in making the following deductions;

1. In Behring's serum we have a remedy which, when used in the early stages of diphtheria, is a safe and valuable curative agent, surpassing all other known methods of treatment.

2. That Behring's serum has decided prophylactic power, either rendering the individual, for a time, absolutely immune against the invasion of the bacillus diphtheria, or giving partial immunity so that the disease is rendered most mild.

In conclusion I desire to express my gratitude to Dr. Amand Ravold for the bacteriological and experimental work, and for many courtesies shown the writer during the progress of these cases. I also desire to speak in the highest praise of the scientific and valuable work now being done by the St. Louis Health Department, which enables the physician, through the assistance of the Bacteriological Department, to arrive at an early and positive diagnosis in diphtheria.

The Curette in Puerperal Infection.—Ferre (*Nouvelles Archives d' Obstetrique et de Gynecylogie*) strongly advocates the use of the curette in puerperal infection, after a long experience of irrigation of the uterine cavity, a procedure which lowered mortality but did not save several bad cases. At the same time he never had recourse to the curette after labor except when placental remains required removal. Since using the curette six bad cases had been treated by Ferre with only one death. The fatal case, it must be noted, was a private patient, and symptoms of infection immediately followed natural labor at term. She was left without assistance for five days, and the curette was employed as a last resource. The patient died on the seventeenth day. In a second private case the curette was used on the second day immediately after a rise in temperature with rigors. The symptoms of infection at once vanished. In a third, a live child was born; a twin then presented by the shoulder. Embryotomy had to be performed. Fever set in on the same evening; next day large blunt curettes were used, without anesthetic; the uterine cavity was swabbed with glycerin of creosote and plugged with iodoform gauze. All bad symptoms disappeared at once. The three remaining cases were in the Pau Lying in Hospital, and had all the advantages of treatment in a public institution. They resembled the second above described except that in one case parametritis set in before the curette could be used. All recovered.—*Univ. Med. Mag.*

ALTHOUGH volume after volume has been written about Typhoid Fever and its treatment yet it is as new and interesting a subject to-day as it ever was. Its etiology is still under discussion, but the medical profession have all agreed on the necessity of "cleanliness, proper feeding and supporting the patient." As a digestive and tonic, Pine-Apple Wine (Zumo-Anana) is an ideal agent in the proper treatment of these cases.

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EDITORIALS

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

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American Medical Association.

The meeting of the American Medical Association at Baltimore on May 7, 8, 9 and 10, 1895, promises to be, in every respect, of the greatest interest. The many papers that have been announced by the various sections of the Society will insure the scientific success of the meeting, while the social entertainment of the members has been amply provided for by the Committee of Arrangements. The meeting will give the members of the Association a chance to renew old acquaintances and form new ones, exchange ideas and, by so doing, improve one another. The advantages of these meetings to the general profession as a class and to the individual members of the Society are so numerous, so self evident and have been pointed out so often, that it is useless to expatiate upon them to any great extent. We have been informed that the various committees have made extensive arrangements to make the meeting as agreeable as useful, and a visit to the historic battle ground of Gettysburg will be a special attraction to many members, the Committee of Transportation having arranged for a special excursion train to that place on May 10, the last day of the meeting.

We firmly believe that with the enormous resources of this great country it will, in a future not far removed, play a leading role in the science of medicine, and with the energy and ambition which characterizes the physicians of this country we hope, and confidently predict, that such a goal will be reached soon. If the American Medical Association will unite its efforts and is, as it should be, supported by every member of the profession, it will be destined to wield the greatest influence in accomplishing such an object and in cultivating and disseminating a true scientific spirit throughout the whole country.

The Significance of Lactic Acid for the Diagnosis of Cancer of the Stomach.

A specific, pathognomonic symptom, a symptom which is constantly present and a positive evidence of a certain affection has, with the exception of a comparatively few instances in which, for instance, the presence of a specific microbe furnishes conclusive proof of the nature of a disease, been sought for in vain. The intricacies which present themselves in an attempt to form an early positive diagnosis, are particularly characteristic of cancer of the stomach, which in its earlier stages is of the most insidious nature and can not be distinguished from other affections of this organ that are accompanied by dyspeptic symptoms. A capricious or entire absence of the appetite, slow, disturbed digestion, the sensation of pressure, fullness and tension in the region of the stomach, eructations, nausea and more or less constipation, coated tongue, offensive breath, bad taste in the mouth, etc, are all symptoms which are found in various affections of the stomach and also form the initiatory symptoms of cancer of that organ. It is only in the later stages of the disease that a more positive diagnosis may be arrived at. Bleeding, the presence of a palpable tumor, the absence of hydrochloric acid, the presence of lactic acid, the microscopic demonstration of conglomerates of cells arranged in the characteristic cell nests of carcinoma, the cancer cachexia, are all symptoms which, as a rule, exist only in the later stages of the disease. The periods of comparative comfort, improvement in the digestion, gaining of strength occur so frequently in the earlier stages of the disease that the physician begins to doubt the diagnosis carcinoma at which he had reluctantly arrived and if it should happen that during such a period of general abatement of all characteristic symptoms the patient is examined by another physician, the latter may laugh at the pessimism of his colleague, until weeks or months afterward he has to admit that he was mistaken. Under such circumstances every additional evidence and help in arriving at as positive a diagnosis as possible is naturally hailed with much enthusiasm. For a while a pathognomonic sign seems to have been discovered, until after careful and critical examination of other pathological conditions it is proven by some one that the formerly supposed infallible sign,

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although it may not be absolutely worthless for the purpose of diagnosis, has been greatly overrated. This was the case with Kussmaul's discovery of the absence of hydrochloric acid in cancer of the stomach.

We now know that hydrochloric acid may be absent in other pathological conditions leading to an atrophy of the specific parenchyma of the organ and that it may be temporarily absent even during a disturbed innervation in certain neuroses. Although it has been proven that the carcinomatous process as such is not the cause of the defective formation of hydrochloric acid in the stomach, but that the intense catarrh of the mucous membrane, accompanying the process, is responsible for this condition, the constant absence of hydrochloric acid during repeated examinations furnishes a valuable aid in diagnosis.

The presence of lactic acid in the carcinomatous stomach has for the last year and a half been often discussed and Boas, who first drew attention to the constancy of this symptom supposed to have found an invaluable sign for this disease in the determination of lactic acid in the stomach contents. He claimed to have found a specific sign of carcinoma of the stomach if the contents of the stomach showed an absence of hydrochloric and the presence of lactic acid, even if no tumor was demonstrable.

Boas' test for lactic acid, in order to determine the probability of cancerous disease, consists in the introduction into the stomach, after it has been cleansed, of a well-cooked oatmeal soup. This is done in the evening and the next morning the contents of the stomach are examined for lactic acid. The probability as to the process of lactic acid formation has been pointed out by Klemperer in a very plausible manner. The diastatic action of the saliva, swallowed with the test meal of oatmeal soup, changes the starch into sugar, which in turn is changed into lactic acid by the constant presence in the saliva of various forms of lactic acid bacilli. The formation of lactic acid in the stomach would be impossible under normal conditions, as the soup would pass out of the stomach before any lactic acid could be produced. The presence of lactic acid after such a treatment is therefore due to impaired motor and secretory activity of the stomach and may be demonstrated in all affections where these are at fault. On the other hand it has been shown and, accepting this explanation as true, it is but natural to expect, that there are cases of cancer of the stomach, such in which the motor and secretory activity is not sufficiently impaired, where lactic acid is found to be absent.

Although it has been proven that the significance of the presence of lactic acid in the stomach after the above test meal is little more pathognomonic of cancer than the absence of hydrochloric acid, the determination of its presence when supplementing the sum of observations by which the physician arrives at the diagnosis "cancer," is a very valuable addition to our means and methods of diagnosing this insidious and dreaded disease.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, April 6, 1895; the President, F. D. MOONEY, M.D., in the Chair.

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DR. W. H. MAYFIELD presented a specimen and read (see page 341) the clinical history of a case of

TERATOMA;

also giving excerpts from standard works upon the subject.

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DR. WILLIAM W. GRAVES read a paper (see page 343) entitled,

A CLINICAL REPORT ON THE VALUE OF BEHRING'S SERUM AS A PROPHYLACTIC AND CURATIVE AGENT IN DIPHTHERIA.

DR. A. N. RAVOLD said that the tubes from the cases reported showed almost pure cultures of diphtheria bacillus. He regretted that the virulency of the bacilli could not be tested separately for each case, but the Health Department is handicapped in carrying out the experiments as fully as might be desired, by the expense and scarcity of guinea pigs.

In the secondary cases, in which symptoms of diphtheria were absent, the bacillus was found, and it was thought that if the virulency could be demonstrated in one case it would probably be the same in all. The tube inoculated from the throat of the mother showed the greatest number of bacilli, but a purer culture could be obtained from a culture in agar-agar made from the tube inoculated from the child's throat. The method of growing the bacillus first in broth for 48 hours, and then injecting one-half or one-quarter of one per cent of its weight of the culture into the guinea-pig gave the best results. The bacillus had reached its maximum growth.

In the case referred to by the essayist, 1 c.c. was injected into the pig. Within 24 hours it was found quite sick, cuddled up in one corner of its house with its hair standing up. The next day, 34 to 46 hours after it had been inoculated, it died, showing the virulency of the bacillus and that the throats of the patients were dangerous to the public.

DR. A. R. KIEFFER briefly related his experience with the antitoxine in a recent case of diphtheria which occurred in his practice.

The patient was a little girl, 7 years of age, who had a very marked case of laryngeal diphtheria. Evidence of obstructed respiration was present, and the membrane

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extended up into the pharynx. Her temperature was 102°, and pulse 120. A full dose of No. 3 serum was injected in the afternoon, and a culture tube was inoculated at the same time. The next day word was received from the Health Department that it was a genuine case of diphtheria.

The patient at first gave no evidence of improvement and at midnight had a convulsive attack at which it almost choked to death. It succeeded in clearing the air passages of a mass of broken down material, and immediately after had relief. The next day the temperature was normal, the child was playful, and 24 hours later was convalescent.

A younger member of the family, 3 years of age, was running about, but had an increased temperature, accelerated pulse and a patch of membrane in the throat. A tube inoculation sent to the Health Department established a diagnosis of true diphtheria. This patient was injected with a dose of No. 1 serum, and was soon convalescent.

Dr. I. N. Love was inclined to be more conservative in accepting the Behring's serum as the only remedy in diphtheria. The reports presented by the essayist are very pronounced and will be placed on record. But we must remember that there are entire epidemics, extending over a year or two, in which all the cases are mild and yield very readily to other forms of treatment. Furthermore, we must remember that pathologists state that the true diphtheria bacillus is found in the mouths and throats of a great many healthy people; so that we must be careful in ascribing the results to the serum in the five cases which remained immune from the disease. We must not be in a hurry in arriving at a conclusion.

Unfavorable reports are coming in from several sources. Dr. J. Mount Blair, of New York City, made a very pronounced protest against it. There is also danger of becoming too conservative, and that is the tendency as we grow older; but we must also not become too receptive.

Speaker mentioned a case seen by him in consultation, which was unquestionably diphtheria. The child was 6 years of age, there was a well organized membrane on each tonsil, about the size of a dollar. The surfaces were dry and the secretions scant.

The patient was given $^1/_{32}$ grain bi-chloride of mercury, well diluted, every hour, and also 12½ grains of benzoate of sodium at the same intervals. Fifteen hours later, at nine o'clock in the evening, the condition had very much improved. Exosmosis was established, the bowels had moved three or four times, a throwing off of the membrane was evident, and the temperature had dropped from 103° to 100°. Three days later the membrane had disappeared, although no serum had been used. If the antitoxine had been employed, another successful case could have been reported.

Speaker has been in the habit of treating all cases of sore throat in children as suspects, and has trained the parents to send for him as soon as the first evidence of the trouble appears. His results with the treatment outlined have been excellent. Of course, he had not had many malignant cases of diphtheria, nor were his patients under the same unfavorable hygienic influences as those of the essayist.

The doctor should not have relied upon the serum exclusively, but should have employed old and tried remedies in addition. One of the greatest advantages in the blood serum is the promptness with which it acts.

Dr. W. W. Graves had used the treatment suggested by Dr. Love, sufficiently often to know its virtues, but nothing has ever acted as promptly and as efficiently as the serum. Its prophylactic powers can not be doubted, especially after the experience in this family. Considering their surroundings and the condition of the throat of the individual members, we have a most favorable field for the propagation and development of diphtheria. No other remedy would have as effectually prevented its development; particularly since the bacillus was found in a virulent form in all the throats save one.

The Association of Military Surgeons of the United States.

The fifth annual meeting will be held in Buffalo on May 21, 22 and 23, under the presidency of Surgeon-General George M. Sternberg, of the army. The programme includes the following addresses and papers:

An Address of Welome to the City of Buffalo, by the Hon. Edgar B. Jewett, of Buffalo.

An Address of Welcome to the State, by the Hon. Levi P. Morton, of New York.

An Address on Behalf of the Medical Profession, by Dr. Roswell Park, of New York.

The President's Address, by Dr. George M. Sternberg, U. S. Army.

The Report of the Committee of Arrangements, by Dr. Albert H. Briggs, N. G. N. Y.

A Report on the Status of the National Guard, by Dr. Nelson H. Henry, N. G. N. Y.

Experiments Illustrating the Degree of "Powder Burn" as Modified by the Distance of the Object, Size and Conformation of the Bore, Amount and Standard of the Powder, and Other Practical Demonstrable Causes, by Dr. Louis A. La Garde, U. S. Army.

The Location and Removal of Missiles from the Cranial Cavity, by Dr. George R. Fowler, N. G. N. Y.

A Discussion of the Report of the Committee on "Litter," by Drs. John Van R. Hoff, U. S. Army and E. T. T. Marsh, N. G. N. Y.

Ambulance Construction, by Drs. Dallas Bache, U. S. Army and Charles R. Greenleaf, U. S. Army.

Conservative Surgery on the Battlefield, by Dr. Nicholas Senn, Ills. N. G.

The Relation of Concentrated Food to Active Service Demands, by Dr. Charles Smart, U. S. Army.

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The Location of Sites for and the Construction of Military Posts in Relation to Proper Sanitation, by Dr. Dallas Bache, U. S. Army.

The Relation of Naval Architecture of Proper Sanitation, by Dr. J. R. Tryon, U. S. Navy.

On the Value of Bromine in Military Surgery, by Dr. M. O. Terry, State of New York.

The Handling and Care of the Wounded on Shipboard, by Drs. A. C. H. Russell, E. R. Stitt and A. M. D. McCormick, U. S. Navy.

The Post Exchange from a Medical Standpoint, by Dr. Philip F. Harvey, U. S. Army.

Infected Bullets, by Dr. Louis A. La Garde, U. S. Army.

Fifty-two Amputations of the Thigh, by Dr. John D. McGill, M. G. N. J.

Instruction of the Hospital Corps, by Dr. H. S. Turrill, U. S. Army.

Upon the Surgeon General of the Militia, by Dr. G. Cook, N. G. N. H.

Field Hospital Service, by Dr. Dallas Bache, U. S. Army.

Some Experimental Work with the New Ball, by Dr. J. D. Griffith, N. G. Mo.

Gunshot Wounds of the Kidneys, by Dr. A. L. Wright, N. G. Iowa.

On the Travois Litter, by Dr. Wladmir F. De Niedman, N. G. Kan.

Details Regarding the Medical Service of the National Guard of the State of New York during the Buffalo Strikes of 1893, by Dr. Lewis Balch, N. G. N. Y.

Details Regarding the Medical Service of the National Guard of the State of New York during the Recent Brooklyn Strikes, by Dr. William E. Spencer, N. G. N. Y.

Details Regarding the Medical Service of the National Guard of the State of Illinois during the Recent Chicago Strike, by Dr. Charles Adams, Ills. N. G.

Method of Caring for the Wounded on the Field and in the Hospitals of the Chinese and Japanese Armies, by Dr. C. U. Gravatt, U. S. Navy.

A Consideration of Scorbutic Manifestations in Young Subjects, by Dr. John C. Wise, U. S. Navy.

Asepsis in Military Service, by Dr. Eduard Boeckmann, N. G. Minn.

A Medical Officer in the Volunteer Army, by Dr. F. W. Byers, Wis.

The Merriam Pack, by Dr. Lewis Balch, N. G. N. Y.

Measures for the Prevention and Suppression of Dangerous Contagious Diseases in Garrison and in the Field, by Dr. H. Lincoln Chase. Mass. V. M.

The Effects and Treatment of Heat and Sunstroks at at Camps of Instruction, by Dr. Orlando J. Brown, M. V. M.

The Mental Evolution of Citizen-soldiers, by Dr. Charles W. Galloupe, M. V. M.

A Report on the Diagnosis Tag for Field Use, by Dr. William H. Forwood, U. S. Army.

ABSTRACTS

MEDICINE.

Some Recent Data Regarding Absorption.—The fact that the various changes which food stuffs undergo in the ailmentary canal are largely preliminary steps to absorption indicates the important part which this process plays in the nutrition of the body. The absorption of substances from the intestines is no longer to be explained purely by physical laws. It is, to be sure, probable that osmosis takes part in the process to a certain extent and under appropriate conditions. However, the researches of Heidenhain and his pupils, Gumilewski and Rohman in particular, have pointed out that diffusion is by no means the most important factor in intestinal absorption. By introducing solutions of salts and food-stuffs into Thiry-Vella fistulæ in animals, these investigators were able to demonstrate that the solid matter was absorbed quite independently of the water present, and, furthermore, that the rapidity of absorption was entirely independent of the diffusibility of the substances. Long ago, moreover, the investigations of Voit and Bauer, and others showed that non-diffusible proteids, such as acid-albumin, could be taken up from the alimentary canal even before they were peptonized—an observation which justified the extensive use of nutrient enemata. There are many facts which testify to the selective activity of epithelial cells in various parts of the body. It is known, for example, that the living epithelium of the bladder obstructs the absorption of urea. And, accordingly, there is nothing physiologically inconsistent in assuming a selective activity on the part of the epithelial cells lining the alimentary canal.

The discrepancy of opinion regarding absorption from the stomach has been largely cleared up by the researches of Edkins and v. Mering, who showed that this organ is the seat of little absorption, even of water. Substances in alcoholic solution are, however, readily absorbed; but this forms a condition rather exceptional than normal, and is not to be considered under ordinary circumstances. Absorption of food-materials is principally confined to the small intestine, and it is to the processes here involved that investigations have chiefly been directed. Some more recent experiments by Heidenhain have given additional conclusive evidence that physiological filtration and osmosis will not alone explain the facts of intestinal absorption; and the researches can not fail to be of interest, since they come from one who has been so prominently connected with this phase of physiological study. The investigations were carried out on dogs. A few results follow.

It is obvious that if intestinal absorption depends upon the simple diffusion of intestinal fluids into the

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blood, those substances which have an endosmotic force equal to that of the latter must fail of absorption; the serum of the dog's blood would therefore be excluded if such were the case. The experiments show, however, that blood-serum is absorbed from the intestine of the dog, even if it contains as large or larger percentages of solids as that of the animal under investigation; furthermore, absorption takes place as completely from the intestine of fasting animals as from that of animals in the height of digestion. The results can not be attributed to any dilution of the introduced serum by intestinal secretions, so that its osmotic power is changed; for further experiments showed that at no period during absorption was the concentration of the intestinal contents less than that of the material introduced.

It is to be noticed that the proteids of the serum are not readily absorbed. The necessity accordingly arose for determining whether the gradual concentration of the intestinal contents in the course of absorption was not due to mere removal of water. The following results show that water and salts were absorbed in about equal proportions, and the organic substances in a lesser degree.

Amount absorbed from serum introduced into the intestine.—First experiment: Water, 68 per cent; salts, 65 per cent; organic substances, 31 per cent. Second experiment: Water, 42 per cent; salts, 40 per cent; organic substances, 13 per cent.

Heidenhain has undertaken further experiments to demonstrate the inadequacy of the diffusion theory. He introduced into the intestine, salt (NaCl) solutions of such strengths that according to the laws of osmosis, the diffusion-currents must pass from the blood into the intestinal contents and increase the volume of the latter at the same time. Contrary to this requirement, however, water was found to have passed from the intestinal contents to the blood, a result obviously not attributable to ordinary osmotic processes. Again, in certain experiments, the blood serum of the animal was found to have an NaCl-content of 0.62–0.69 per cent. On introducing a 0.3–0.5 per cent NaCl solution into the intestine, there was no diffusion of salt from the blood into the alimentary canal; on the contrary, in one case, no less than 70 per cent of the salt in the intestine disappeared in 15 minutes. In experiments performed with parchment tubes, however, the results were in accord with the ordinary physical laws.

Heidenhain has demonstrated the correctness of his view with a variety of salts and in other ways which can not be described here. From the results obtained regarding absorption—of serum, of water from salt solutions the endosmotic tension of which is higher than that of the blood, and of salt from solutions in which the partial tension of the salt is the reverse—it is evident that we must assume some "physiological" force to account for the phenomena. Yet we can not justly say that osmosis plays no part whatever. The processes concerned are doubtless of a complex nature, physical and physiological factors both being involved, and the latter bringing about absorption under those conditions in which the purely physical forces are not competent to give the desired result. The physical characteristics of different salts will not explain the variations in their influence on the absorption of water from the alimentary canal. It seems highly probable that the great retarding action which magnesium sulphate (Epsom salt), for example, exerts on absorption is to be explained by assuming that it inhibits the physiological absorptive power of the intestinal walls. That the seat of this power is in the epithelial cells can scarcely be doubted. Yet no definite assertions regarding the latter can properly be made until further experimental proof has been afforded.

Absorption from the peritoneal cavity is a matter of considerable importance pathologically, if not physiologically, since various conditions may arise which determine the discharge of considerable quantities of fluid into this cavity. That absorption of these fluids may take place, so that they disappear without operative interference, is a matter of common observation among clinicians, and has, moreover, been demonstrated by a number of invnstigators. Bearing on this subject are some recent experiments from Heidenhain's laboratory by Dr. Orlow. By introducing definite quantities of dog's serum into the peritoneal cavity of dogs and allowing it to remain there for a few hours, Orlow was able to determine some interesting facts regarding the nature of peritoneal absorption. He found that when serum of the same osmotic tension as that of the animal experimented upon was used, not alone water, but salts and organic compounds as well, were absorbed into the blood current, as shown by the following figures:

	I	II	III
Water absorbed, - - - - -	%25	38	25
Organic substances absorbed, - -	%26	34	20
Inorganic substances absorbed, - -	%29	31	29

That the substance did not pass into the lymphatics was indicated by the fact that the flow of lymph from the thoracic duct was not augmented. In this connection it is to be noted that Starling has lately observed the absorption of certain coloring matters from the pleural and peritoneal cavities directly into the blood circulation, a fact demonstrated by their appearance in the urine much sooner than in the lymph.

Since the laws of osmosis are insufficient to explain absorption under these conditions, where forces inducing diffusion are wanting, we must, as in intestinal absorption, assume some physiological activity on the part of the walls of the peritoneal cavity, the endothelial cells of the diaphragm, or of the blood-capillaries to account for the phenomena. However, when concentrated serum was used in Orlow's experiments, not only was no absorption observed, but there was even a transudation of fluid from the capillaries into the abdominal cavity. Under these circumstances, where the conditions were unfavorable to osmosis, absorption did not take place. Furthermore, experiments regarding the absorption of salt solutions of various concentrations gave but few re-

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sults which could not be explained by the ordinary laws of diffusion.

Comparing these results with those mentioned in the case of intestinal absorption, it will be observed that though they differ considerably, there is a certain extent of agreement between them. Absorption presents in either case certain facts and problems which can not be explained on a purely physical basis and which point to an unmistakable physiological process, if we may so term it, as the determining cause. In either case the physical and physiological forces act in conjunction when proper conditions present themselves; but in the peritoneal cavity the physical processes relatively predominate—a result possibly due to the different anatomical environment.

Our knowledge regarding the influence of the nervous system on the phenomena above discussed is very incomplete. The direct connection which Heidenhain, Langley and others have demonstrated to exist between the nervous system and the secreting cells of the salivary glands has not yet been worked out to the same extent for the other glands concerned in the digestive processes. That the nervous system has a marked influence is highly probable from a variety of considerations; the effect may, however, be a purely vascular or a secretory phenomenon. The experiments of Moreau have often been quoted to show the influence of the nervous system on intestinal absorption. In dogs and cats this investigator ligatured a loop of the intestine 10 to 20 cm. in length, and likewise equal lengths above and below this portion to serve as controls. The mesenteric nerves going to the middle loop were isolated carefully and divided. After 24 hours, the subject of experiment was killed and the three portions of intestine examined. The two portions, the nerves and blood-vessels of which were intact, were found to be empty, while the middle loop had fluid contents which amounted even to 200 c.c. The latter were clear, alkaline in reaction, and gave no coagulum on boiling. These experiments have been interpreted in various ways; some writers have attributed the results obtained to a secretory activity on the part of the intestinal epithelium, comparable to the phenomena observed in the secretion of saliva after section of the chorda tympani nerve (so-called palalytic secretion). Extirpation of the sympathetic abdominal ganglia is also said to cause the intestinal canal to be filled with watery fluid and to give rise to diarrhea. These results may, however, be due, in part at least, to diminished absorption after the removal of normal nervous influences.

In a recent research intended to throw some light upon the relation of the nervous system to absorption, Prof. Leubuscher and Dr. Tecklenburg have repeated the experiments of Moreau on rabbits, and in the main confirmed his observations. They found that the fluid in the intestine was usually somewhate tinged with blood; in no case did it possess any amylolytic or proteolytic power. These writers therefore regard it as a transudation from the blood rather than as a secretion. To determine more precisely whether section of the mesenteric nerves exercises any direct influence on absorption, the following experiments were carried out: The abdominal cavity of a narcotized rabbit was opened; two adjacent loops of the small intestine, approximately equal in length, were ligatured and the mesenteric nerves leading to one of these were divided. Several cubic centimeters of an accurately determined potassium iodide solution were now injected into each loop. The intestine was replaced in its position and the wound closed. Within an hour the animal was killed, and the amount of potassium iodide remaining in each ligatured portion of the intestine determined. In every instance but one, it was found that more—nearly twice as much—iodide was absorbed from the loop the nerves of which remained intact. While an objection might be found in the fact that a number of smaller lymphatic vessels are unavoidably severed in dividing the nerves by the method described, this is of no moment; for we know that water and salts are absorbed mainly by the blood-vessels rather than by the lacteals.

In attempting to determine the way by which the central nervous system produces its effects on the functions of the intestine, Leubuscher and Tecklenburg extirpated the large abdominal ganglia in rabbits. They confirmed the observations of other investigators, namely, a general wasting of the body as in imperfect nutrition. The urine occasionally reacted acid—a sign, in herbivora, of the consumption of body-tissue. Animals which survived the operation for six weeks were literally composed of skin and bones.

To show the influence of the nervous system on subcutaneous absorption, two frogs of the same size were selected. In one, the left ischiadicus and cruralis nerves were divided in the region of the pelvic girdle; in the other, the same dissections were made, but the nerves were left intact. A small quantity of strychnin nitrate was now injected under the skin of the left leg of each.

Marked differences were noted in the readiness with which the usual toxic symptoms occurred. The time was often twice as long for the frog with divided nerves as for the control animal; furthermore, the intensity and duration were always much less in the case of the former animal. The differences between the animals were the less pronounced the longer the period elapsing between the operation and the injection of the poison. Following is the explanation offered for the phenomena. The section of the nerves is attended by an immediate dilation of the vessels, with a consequent slowing of the circulation. Absorption is retarded in this way. As the circulation is gradually restored to its previous condition, absorption follows in the normal manner. There are certain clinical experiences in accordance with the above facts. Paralysis of the limbs is frequently accompanied by loss of tone in the blood-vessels, attended sometimes by higher local temperature and by edematous changes.—*Dietetic Hygienic Gazette.*

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Cocaine Cataphoresis in Neuralgia.—It is pleasant to have one's views on the treatment of neuralgia in superficial nerves corroborated by such experience as this of Dr. McGuire (*Gaillard's Med. Jour.*). The editor of this department has frequently said and published that neuralgias in superficial nerves (such as branches of the trigeminus) are always best treated by cocaine cataphoresis, as far as the immediate relief of pain is concerned. This method is always the most satisfactory where the pain is due to a local lesion in the nerve, and the neuralgia is not central.

The case instanced by the author was that of an adult man, with neuralgia of the inferior dental branch of the inferior maxillary nerve, and gave relief; but the pain returned some months after, in the lingual branch of the same trunk.

Mastication was so painful that he was compelled to live on liquid food. Swallowing, speaking, or moving the tongue in any way brought on violent paroxysms of pain. McGuire goes on to say:

"I determined to try the effect of the cataphoric use of cocaine over the nerve as it passes to the side of the base of the tongue, and was induced to do this by remembering that my son, some months ago, had not only relieved, but permanently cured, several obstinate cases of neuritis by this method.

"I took the positive pole of a galvanic battery, covered it with a piece of absorbent cotton, saturated it with a ten percent solution of muriate of cocaine, and placed it in the mouth over the portion of the nerve which is the usual site of operative procedures, placed the negative pole on the external surface of the cheek, and passed a current of five milliamperes for a period of five minutes. The pain was instantly relieved, and I must confess, much to my surprise, did not return for twenty-four hours, a period much longer than would be required for the effect either of the electricity or of the cocaine to wear off.

"Since that time, two weeks ago, the patient has been treated daily in the manner I have described.

"The patient has only occasional slight twinges of pain, is able to speak distinctly, and to masticate solid food, and I have every reason to hope, with the gratifying results already obtained, and the cure of somewhat similar cases in the hands of my son, a short time ago, that permanent and positive good will result.

"The cataphoric action of electricity, and its application in medicine and surgery, although a comparatively new subject (see chapter on Cataphoresis, by Dr. Peterson, in "International Handbook of Electrotherapeutics") has already received considerable study, and I have myself made some contributions to medical literature on the use of iodine by cataphoresis in cases of goitre and enlargements of the lymphatic and other glands.

"It is easily demonstrated that if the positive pole of a galvanic battery be saturated with any detectable substance and a current allowed to pass, the same substance can be detected at the negative pole, thus proving that the current, which flows from the positive to the negative pole, has carried it through the tissues with it; this is a purely physical process, and is known as cataphoresis.

"Now, if the substance placed on the positive pole be one which has an intrinsic effect on the tissues through which it passes, the effect of cataphoresis will be twofold—the effect of the current and the specific action of the drug. For instance, if the positive pole be moistened by a solution of strychnine and applied to the skin of a rabbit, and the negative pole be placed on some indifferent spot and a current passed, the animal will not only be affected by the electricity, but poisoned by the action of the strychnine. In the case I am discussing, the positive pole was placed over the inflamed nerve, not with the intention of getting its action, but because it was the pole from which the current flowed, and which drove the cocaine into the tissue. Incidentally, however, I obtained its effect.

"The two poles of a galvanic battery have distinct actions. The positive pole decreases the excitability of a nerve and acts as a sedative. The negative pole increases the excitability of a nerve and acts as a stimulant.

"Thus, fortunately, in the cataphoric use of cocaine to relieve pain in an inflamed nerve, I applied over the seat of irritability the pole of the batttery which was itself an anodyne, and whose action augmented the sedative effect of the drug."—*Amer. Med.-Surg. Bulletin.*

Respiratory Complications of Typhoid Fever.—Acute rhinitis may manifest itself early or later in the disease. It usually disappears before convalescence is established. The dried secretions, which block up the nasal passages and annoy the patient, may be removed by an alkaline or oily spray, applied two or three times daily. A saturated solution of boric acid answers well. An oily spray, consisting of thymal grn. ½, oleum caryophylli minims 3, and liquid albolene one ounce, gives much comfort.

Necrosis of the nasal cartilage occurs occasionally in the course of typhoid. Perforation of the nasal septum is by no means always due to syphilis. There are few cases of perforation of the septum, without involvement of the vomer, that are of specific origin. The treatment is to use the sprays as above and later touch the ulcerating edges with iodine.

Acute laryngitis may cause great inconvenience, but is easily relieved by sedative vapors of opium, belladonna or lupulin. Five grains of either extract of belladonna or opium are added to one ounce of water. A teaspoonful of this is placed in a pint of water at 150 and the patient allowed to inhale through an ordinary inhaler; or eight grains of boric acid and one or two of zinc sulphate to the ounce of distilled water may be sprayed into the throat; or three to five grains of menthol in an ounce of liquid albolene may be used in the same way. If edema of the larynx occurs the parts should be sacrified at once. If this fails to give relief

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tracheotomy should be done immediately. It is not safe to depend upon pilocarpine.

In a little less than one per cent of all fatal cases, chondritis or perichondritis of the laryngeal cartilages occurs. It is indicated by tenderness in the larynx, dysphagia, hoarseness and dyspnea. This condition soon requires tracheotomy. The majority of these cases prove fatal.

Pleurisy is most likely to occur late in the attack. The symptoms are not usually prominent. Careful examination must be made. The collection of fluid usually becomes purulent and empyema results. At first aspiration should be performed, but if this does not give proper results within two or three weeks resection should be performed; in the mean time the patient's nutrition should be looked after.

Bronchitis is a comparatively common complication of typhoid fever. It is sometimes associated with lobular pneumonia and with hypostatic congestion of the lungs. Slight catarrhal inflammation needs no mention, but a grave complication is the inflammation of the finer bronchi. As a rule there is little cough or expectoration. Although respiration is accelerated the patient does not complain of dyspnea. Passive congestion is occasionally associated with it and gives rise to slight dullness at the base of the lungs. Upon auscultation sibilant, moist and subcrepitant rales are heard. When the rales are extensive and are accompanied by expectorations of tenacious stringy mucus and by dyspnea, the prognosis is unfavorable. In such cases, carbonate of ammonia, strychnine, nux vomica and alcoholic stimulants are indicated together with counter irritants to the chest.

Hypostatic congestion and pulmonary edema result from imperfect circulation and long continuance in one position. The patient ought to take frequent deep inspirations and have his position often changed.

Lobar pneumonia is a frequent complication. It may develop in the beginning of the attack of typhoid, although it does not usually occur until the second or third week. True croupous pneumonia comes on insidiously; its symptoms are often masked by the original disease. Its presence is indicated by increased rapidity of the pulse and respiration with irregular temperature and great prostration. Cough and bloody sputum are seldom present. The diagnosis is made on the symptoms already mentioned and the more or less imperfect physical signs of consolidation. Extensive inflammation of the lung complicating typhoid is always very grave. In treatment all depressing agents should be avoided.—E. Fletcher Ingalls, M.D., in *Med. Examiner; Amer. Med.-Surg. Bull.*

On Diastolic Accidental Cardiac Murmurs.—It is generally admitted that the mere hearing of a systolic murmur, without other clinical signs, does not justify the assumption of a valvular lesion, since such murmurs have been distinguished in persons apparently in perfect health, but more especially in cases of anemia, fever, jaundice, etc, where the post-mortem examination excluded positively any valvular lesion.

Such murmurs are designated accidental, and we understand by that term that no importance is to be attached to those sounds with reference to the clinical picture; that is, that there is no disturbance of the valvular mechanism. These murmurs should be distinguished from so called functional murmurs which are due to a relative insufficiency of the valves, caused either by anemia or by any other affection which damages the cardiac muscle and leads to dilatation of the ventricles, and, therefore, to more or less disturbance of the valvular mechanism.

We are able to diagnose these functional murmurs on the same lines employed in murmurs due to valvular lesions. And the distinction is one of practical importance, since the functional murmurs are treated just as the murmurs due to anatomical valvular lesions, whereas the purely accidental murmurs offer no indication for therapeutic measures.

The explanation of these purely accidental murmurs is still more or less hypothetical, but there is reason to believe that they occur whenever the conditions are favorable to an abnormally rapid blood flow. We are also of the opinion that the physical nature of the blood in anemia plays a certain part in causing these murmurs, since, having less corpuscles, there is favored that whirling motion which causes abnormal sounds.

Now, although the occurrence of systolic accidental murmurs is generally accepted, the question of the existence of such murmurs during diastole has not yet been settled.

We shall pass over the murmurs with anatomical lesions to the consideration of the functional murmurs, using the terms functional and accidental in the strict sense pointed out above.

In the same way that we admit a relative mitral insufficiency, we must admit a relative aortic, or pulmonary, insufficiency, because it seems likely that with very high blood-pressure the aorta, or pulmonary, artery, should distend to such an extent that the semilunar valves would become insufficient. The relative mitral insufficiency depends on a weak—the two other insufficiencies, however, on an exaggerated—heart action.

In a like manner Flint has accepted a functional mitral stenosis. Presupposing an aortic insufficiency, he believes that the blood, regurgitating from the aorta, will expand the mitral valve to such an extent that the blood coming from the auricle passes through a more or less stenosed opening.

Now, do we find purely accidental diastolic murmurs? Let us here cite a few points in the histories of two cases of pernicious anemia. The first, a woman of 30, gave all the symptoms of a very severe anemia. The heart, which concerns us most in this discussion, gave the following physical signs on July 9: The superficial and deep heart dullness enlarged to the left; the second sound over the pulmonary artery markedly increased in intensity; quite a loud systolic murmur heard most dis

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tinctly in the left third intercostal space, near the sternum; the second sound, at the apex, was not clear, but there was no distinct diastolic murmur; the blood contained only 15 per cent hemoglobin. Ten days later the percentage of hemoglobin had fallen below 10 per cent, making even an approximate estimation impossible. At this time the heart showed, in addition to the physical signs mentioned above, a distinct diastolic murmur at the apex, which was not presystolic in character.

The post-mortem examination was made, July 20, and showed, among other signs, dilation of the left ventricle; the valves, however, perfectly normal; marked fatty degeneration of the cardiac muscle; no signs of pericarditis.

The second case was a woman of 29. On Sept. 18, 1894, the heart was dilated somewhat to the left; a systolic murmur heard all over the heart, but most distinct over the middle of the sternum; second sound over the pulmonary artery somewhat exaggerated. No diastolic murmur. Blood showed 20 per cent hemoglobin. On Sept. 20, hemoglobin had been reduced to 10 per cent. On Sept. 30 the above physical signs persisted; and, besides, we have a well-marked diastolic murmur, not presystolic in character. The post-mortem on Oct. 2 showed dilation of both ventricles, fatty degeneration of the heart muscle, especially of the papillary muscles; valves normal.

The systolic murmurs in both cases were doubtless partly accidental and partly functional. But were the diastolic murmurs accidental? The fact that the post-mortem examination showed no change in the valves excludes the possibility of murmurs dependent on anatomical lesions. They were not functional murmurs, because the only functional diastolic murmurs known are the relative insufficiency of the aortic and pulmonary valves and Flint's functional mitral stenosis.

The former two, however, require an increased blood-pressure, which was wanting in the above cited cases, and the latter presupposes an aortic insufficiency which was excluded.

We are, therefore, justified in answering the question as to the existence of diastolic accidental murmurs in the affirmative.—Professor Sahli, in *Corresp.-Blatt f. Schweiz. Aerzte; Amer. Med.-Surg. Bull.*

The Cool-Bath Treatment of Enteric Fever.—Although the cold-bath treatment of typhoid is identified with Brant, of Stettin, it really originated with Dr. Currie, of Liverpool, in 1787. After his death, it lapsed until it was revived by Brandt, in 1861. The indications for the bath are a continued temperature of 102° F. to 104° F. for several days, with marked evening rise, and no local lesion, like pneumonia, to account for it. The temperature should be taken half an hour before the bath and regularly every three hours. Whenever the rectal temperature rises to 102.2° F., the bath should be repeated. In some cases a tepid bath at 87° F. or 90° F. for thirty minutes is better borne; in others, a bath at 66° F. or 78° F. for fifteen minutes. When the temperature no longer rises to 102.2 F., but still remains above normal, a warm or tepid bath for fifteen to thirty minutes night and morning is beneficial and grateful to the patient.

The author has compiled from various sources the following code of rules:

1. A temperature of 102 2° in the rectum calls for a bath, and it must not, as a rule, be permitted to rise higher without giving the bath unless the patient is in a sound sleep.

2. The bath, long enough for the patient to be at full length in, is brought close to the bedside, and the patient carefully lifted in and out in the horizontal posture.

3. Half an ounce or 1 ounce of old pale brandy in 2 or 3 ounces of soda or erated limewater to be given first (in case of adult).

4. The patient always must pass water before being put in the bath.

5. The patient to be immersed up to the neck; the head to be constantly sponged; and the chest and extremities, not abdomen, to be gently rubbed by an attendant.

6. The first bath to be given at 90° F. or 85° and cooled down by adding cold water to 75° or 70°. If the patient bears it well, subsequent baths may be given at 80°, and cooled down to 70°. The cold water is poured over the patient's head and chest.

7. Average duration of bath, ten minutes; some say until patient begins to shiver; but if he begins to feel cold or gets uneasy, the bath must be cut short. Where a patient is nervous or bears the cool baths badly he must be kept in tepid ones at 87° for fifteen, twenty, or thirty minutes, the more prolonged immersion producing the desired effect.

8. Lift the patient carefully onto a couple of large, soft bath towels laid over a mackintosh sheet, and rub him dry briskly, except the abdomen, which dry gently, envelop him in a warm blanket, and put him in bed, covering lightly, and give him a cup of warm coffee and milk or peptonized cocoa and milk.

9. Half an hour after take the temperature, in the rectum preferably, when it should be 2° or 3° lower.

10. Take the temperature every three hours, and as soon as it again rises to 102.2° F. repeat the bath, unless he is sleeping, when, as a rule, he must not be disturbed, even if the temperature rise to 104°, but the bath deferred till he awakes.

11. Usually a bath is indicated every six hours. Sometimes, however, during the fastigium the pyrexia is so obstinate and uncontrollable as to call for a bath every three or two hours.

12. During the night, baths are seldom called for except by an extremely high temperature.

13. In case the bath lowers the temperature only 1° or less, or only for a very short interval, it becomes necessary to lower its temperature to 66° (cool bath) or even 45° (cold), and lumps of ice may be put in the

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bath to cool it down with perfect safety, as was done in one of my cases. In Strumpell's experience, baths below 73° F. are seldom needed. He regards 80° to 85° F. as the average.

14. If intestinal hemorrhage occurs, baths must be discontinued.

The advantages of the bath treatment are:

1. Diminution of fever and calming of the nervous system.

2. Disappearance of headache, stupor and delirium.

3. Irritability of the gastro-intestinal mucous membrane more or less relieved with less thirst, vomiting and diarrhea.

4. Improvement of the pulse.

5. Diminished dehydration of tissue and lessened danger of bedsore.

6. Diuretic action on the kidneys.

7. Reduction by 50 per cent of mortality.

The objections to the treatment are: Expense, public prejudice, nervous dread of patients, and increased frequency of relapse.

The contra indications are: Peritonitis, perforation, hemorrhage and advanced cardiac weakness. Broad bent does not think albuminuria or pulmonary complications prohibitive.—C. Stennett Redmond, L.R C.P.I., in *British Medical Journal.*

Medical Treatment of Diseases of the Stomach.—Abnormal gastric conditions may depend on incipient pulmonary tuberculosis, peribronchitis, chronic pleurisy (particularly the diaphragmatic form), asthma and diseases of the heart and blood-vessels, These disorders, then, require treatment. Where there are nausea, inflation, and sour or bitter taste, irrigation is indicated. To repeat this for its psychic effect is inadvisable. But to clear the cavity of all the food remnants, one or two washings are not sufficient. The tube should be soft and have a double opening at its lower end. It should be moistened with warm water. Its use is contra-indicated in acute gastritis, except that caused by poisonous or fermenting food, in painful pharyngitis, gastric ulcer, a dilated heart, or aneurism or strictured esophagus. About 500 gms. of warm water or warm alkaline water are run in, once or several times. When mucosis separates the ingesta from the absorbing and secreting epithelium, irrigation is indicated. Then chloride of sodium and carbonates act as solvents. In bad cases of chronic gastritis, solutions of 1 to 2000 of nitrate of silver are of benefit when preceded by warm water with carbonote of sodium. In an atonic and non-secreting stomach, papayotin is an excellent aid to digestion. Pancreatin changes starch into dextrin, splits up fats, etc.; but in acids it has no effect, and, therefore, it is useless to put it into an acid stomach. Pepsin in water with HCl dissolves albuminates. When the stomach dose not secrete it, as in anemia, scrofulosis, etc., its use is beneficial.

The preparations of bismuth are a gentle and antifermentative protective to the gastric mucous membrane. The gastric neuralgia of the anemic, hysteric, and pregnant are favorably acted on by it. When nitrate of silver is to be taken, no salt should be allowed in the food, and the stomach should be fairly empty. Solutions are better than pills.

To an adult one-half to one grain in four ounces may be given in tablespoon doses every two hours. For irrigation a few grains of the silver salt to a pint of water may be employed. Charcoal is of no use when wet. It should be given in wafers or capsules, and only the carbo-animalis should be used. For atonic stomachs bitters are appropriate. The roots of gentian, calumba, quassia-wood, dandelion, Irish moss, and condurango are beneficial. The best of all bitters is nux vomica. Rhubarb in small doses has no cathartic effect. It improves the appetite, particularly in rickety children. Motory incompetence may be treated with orexin, spices, massage, internal douches (hot and cold), electricity, etc. Lack of HCl results from anemia, defective innervation, atrophy of glands, cicatrices, or tumor. Pepsin is deficient at the same time. They can be supplied in medicine. Excess of acid is more frequent. It may be due to chronic gastritis, ulceration, or neurosis. The abuse of tobacco or alcohol also causes it. Whatever excites gastric secretion must be avoided. Instead of aromatics, acid, bicarbonate of sodium, etc., give nitrate of silver in solution—4 to 3000 or 6000—in tablespoon doses. In all cases antacids are indicated, such as prepared chalk, magnesia, bismuth, etc. Butyric acid ought to be neutralized before food is taken. Magnesia must be given ten minutes before a meal. Round ulcer requires, theoretically, absolute rest. The only food permissible is sterilized milk, not to be drunk, but taken by the teaspoon. The stomach should be kept alkaline. It must not be inflated. The meals should be small, but frequent. Opiates are good in inforce restd. Irrigation ought to be avoided.

In the vomiting and neuralgia of neurotic persons these remedies have served best the author:

1. Half to one drop doses of tincture of iodine every one to three hours.

2. Arsenious acid in doses of one-fifth to one-third of a milligramme every one to three hours.

3. The valeriante of zinc in doses of from 75 to 125 centimeters daily in divided doses.

The oxide of zinc is also useful, in six daily doses, of from two to five centigrammes each. In vomiting of pregnancy, one drop every hour of wine of ipecac has proved useful. The application of the interrupted current, one pole to the neck and the other to the epigastrium, is also effective. Constipation may give rise to vomiting, and should be relieved by purgation and rectal irrigation. In protracted fermentation the character of the food must be inquired into. The nose and pharynx should be examined. Among the anti-fermentatives used by the author is HCl. Thirty to forty drops in a quart of water make a good drink. Creosote, hypermanganate of soda, resorcin, calomel, etc., act very well.

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In gastric hemorrhage, neither sound nor irrigate the stomach. Chloride of iron and acetate of lead can do little good. Avoid using alcohol, and even water. Ice internally may do good by contracting the stomach. Ergot, hypodermically, may be used. Keep the stomach contracted by a heavy ice-bag; the body recumbent; food, as iced milk, in small quantities. Subnitrate of bismuth is useful, and probably will be the only thing tolerated. Rest for the mind and circulation can be obtained by the hypodermic use of morphine. The loss of appetite in gastric carcinoma may be benefited by nux vomica, calumba, and particularly condurango. Anemia needs mild iron preparations; constipation should be treated with vegetable, and not saline, purgatives; for pain we may give morphia, but not chloral hydrate; charcoal or creosote is used for eructations; vomiting is checked by morphine, creosote, hydrochloric acid. To a certain extent, the secondary symptoms can be more than simply treated. Methylene blue is efficacious in many cases; in doses of one to two grains daily it will relieve and improve. Tumors are often reduced in size by its use —A. Jacobi, M.D., in *Med. Record.*

OBSTETRICS AND GYNECOLOGY.

Tuberculosis of the Human Placenta in Relation to Congenital Tuberculosis.—The authors state that when Birch-Hirschfeld and Schmorl reported their case of congenital tuberculosis, in the year 1891, the exact manner in which the tubercle bacilli passed from the maternal organism to that of the fetus was not understood. Lehmann's observations show that in acute miliary tuberculosis during pregnancy the placenta may be affected with tubercle as well as the other organs. The placenta, it seems, may occasionally be affected in cases of chronic pulmonary, as well as acute miliary, tuberculosis. Autopsies on cases of advanced pulmonary tuberculosis frequently show circumscribed tuberculous foci in organs other than the lungs, such as the liver, spleen, or kidneys. Gaertner has demonstrated that where animals with pulmonary tuberculosis are pregnant, the fetus is not so very rarely infected with tubercle bacilli.

The present authors have met with three cases bearing on the subject:

1. Autopsy revealed acute miliary tuberculosis; the subject was in the eighth month of pregnancy, and was brought to the hospital in an unconscious condition. Cesarean section was performed, but the child died after two hours.

2. This patient died during pregnancy, with acute miliary tuberculosis.

3. A case of chronic laryngeal and pulmonary tuberculosis; died suddenly of profuse hemoptysis. Cesarean section was performed soon after death, but child was found already dead.

In all the cases placental tubercle was found, but only very little in Case 3, and less in the placenta than in other organs in the other two cases. The tubercle bacilli were probably in all three cases carried to the placenta in the circulating blood; but in No. 2, where there was also tuberculous peritonitis, the bacilli, though less likely, might also have been carried from the peritoneum into the uterus by the Fallopian tubes. In cases of acute miliary tuberculosis the bacilli circulating in the blood must be equally distributed to all organs; and the only way to explain why in Cases 1 and 2 less tubercle was found in the placenta than in the other organs is to suppose that the placenta is more resistent than other organs to the bacillus. In all three cases, tubercle bacilli were found in the fetal placenta villi, but only in Case 2 were any bacilli found in the body of the fetus; even in this case there were no macroscopic changes, but bacilli could be detected by the microscope in the liver, and a lymph gland in the neighborhood of the liver. The authors think that the reason why only few bacilli had passed into the fetal circulation is to be found in the changes produced in the vessels of the tuberculous villi. These changes, consisting in the closure of vessels by the formation of hyaline thrombi and the overgrowth of the endothelium, to some extent form a barrier hindering the spread of tubercle to the fetal circulation.—Schmorl and Kockel in *Beitr. z. Path. Anat.; Amer. Med. Surg. Bull.*

The Evolution of Hysterectomy in America.—Ernest W. Cushing, of Boston, read a paper at the New York Academy of Medicine in which he said that while the first operations for removal of the uterus were done in this country, yet to no man belonged the exclusive credit of the perfected operation of to-day. It had been a growth, rather than a sudden invention. Burnham, of Lowell, was the first to successfully do hysterectomy, 1853, and was soon followed by Kimball, of the same place, who removed the uterus for a myomatous tumor. Their method of operating was followed for many years, and their results were good when we considered that at this time only the worst cases fell under the knife and antisepsis had not yet been developed. Their mortality was about seventy-five per cent. Burnham performed no more hysterectomies after 1876, and, owing to the fatality of the procedure, only isolated cases were reported for some years subsequently, attention being turned to less radical procedures, such as the use of the cautery, removal of the appendages (Battey, Hegar), injections of ergot. Then came the Schroeder and Marcy improvements upon Kimball's method of treating the stump, Marcy writing in 1881. Dr. Cushing thought Dr. Marcy's method was probably the best one for eight years, or until ligation of the uterine arteries in their continuity was introduced by Stimson. There was no prominent improvement in hysterectomy for ten years prior to 1888, attention having been directed almost entirely to perfecting Schroeder's method of fixing the stump in the abdominal wound.

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In February, 1888, Dr. Mary Dixon Jones described a case in which she opened the vagina. When Bantock visited this country in 1887, his method of extraperitoneal treatment of the stump had reached such a state of perfection that it was resorted to almost exclusively. But in 1889 Dr. Stimson read a paper describing the ligation of the uterine arteries in their continuity, and opening up a procedure which was soon destined to replace the extra-peritoneal method almost entirely. It initiated wide resort to abdominal extirpation of the uterus for various conditions. Eastman, in 1887, had already published his modification of Schroeder's method. In October, 1891, Joseph Price had operated on two cases, opening into the posterior vaginal fornix, modifying and improving Jones's operation, yet he favored Bantock's method and continued to do it with great success to this day. Efforts had not been wanting to get rid of clamps on the stump—Polk, Kelly, Byford. In connection with the intraperitoneal treatment of the stump the work of A. P. Dudley and J. R. Goffe was referred to, the latter reporting four cases treated by his method in 1890, leaving a cervical stump, covered by peritoneum; but since in all there was a rise of temperature about the fourth day it pointed to lack of drainage, and the cervix had to be dilated. To avoid this danger of infection, some had cauterized the stump and dilated, some had introduced no ligatures into the cervix, others had removed it with the uterus.

About this time, Boldt was using the method of Martin, closing the peritoneum entirely and leaving the vagina open.

In New York, a further development of hysterectomy was made by the introduction of the Trendelenburg position by Dr. Florian Krug. In 1892, Polk read a paper at the meeting of the American Gynecological Society, describing his method of supra-vaginal hysterectomy, which made a very strong impression, and led many to abandon entirely the extra peritoneal fixation of the stump. At the same meeting, Baer read a paper, describing a treatment of the stump, which Dr. Cushing said was essentially that of the Vienna operator Kroback. The next step related to the application of hysterectomy, Dr. Polk, supported by Dr. Krug, advocating it in 1893 in all cases of disease necessitating entire removal of both tubes and ovaries. There were many, however, who still preferred to leave hysterectomy in such cases for a future operation in the event that it should be required.

At present, the question of choice of route was occupying the attention of the profession, and it seemed that general surgeons inclined toward the abdominal method, while gynecologists had been more impressed with such advantages relating to the vaginal route as avoidance of shock, liability to hernia, etc.—*Med. Record.*

Conception through an Accessory Tubal Ostium.—Cesarean Section on Account of a Prior Ectopic Gestation.—Prof. M. Saenger (*Monatssch. f. Geb. und Gyn.*) reports a case which is characterized by the two following interesting features:

1. The unusual mode of conception.
2. The unusual indication for Cesarean section.

The patient, aged 32 years, had given birth to three children, the last one eight years before. Had aborted twice between the births of these children. Two years ago she believed she had again aborted at the third month. She had very severe pain in the right groin, accompanied by fainting spells and vomiting. There was discharge of blood for a considerable time afterward, but no decidua nor fetus came away. She was confined to her bed for eight months, on account—as her physician stated—of a copious blood effusion into the peritoneal cavity. The patient went into labor at about the right time, but no progress was observed after twelve hours of severe pains, owing to an obstruction caused by a hard cicatricial ring around the cervix. Saenger performed a Cesarean section, and delivered a child which was readily resuscitated. He found that the other abdominal end of the right tube was lost in a hard exudate in Douglas' sac. The right ovary was not to be found. In the bottom of Douglas' sac a firmly adherent tumor, the size of a closed fist, was found, which was the shrunken fetal sac. The abdominal end of the left tube lost itself also in the exudate behind the uterus. At about the center of the free border of the tube, some seven centimeters distant from the left horn of the uterus, was a well-marked tubal ostium with a rosette the size of a fify-cent piece. Close under this, crossed by some fine adhesions, lay the elongated left tube. On the conclusion of the exploration the uterus was returned within the abdomen, and the abdominal wound closed in the usual way. The patient made a satisfactory recovery.

From the foregoing it is seen that the woman had an ectopic gestation two years before, with a long hematocele, and that the last conception could only have taken place through the accessory tubal ostium.—*Amer. Gyn. and Obst. Jour.*

Reproduction of the Uterine Mucosa after Curetting.—Bossi (*Gaz. Ospedali*) gives the results of his experiments and clinical observations on this subject. In 1884 Duvelius examined and reported on the uteri of two cases in which hysterectomy had been performed two and four months after curetting, and in each case the mucosa was completely reproduced. Bossi endeavored to find approximately the minimum time that the uterine mucosa takes to reproduce itself so as to be physiologically active after curetting. By direct examination of the uterus in three cases where hysterectomy had been performed twenty-five, twenty-seven and fifteen days respectively after a previous curetting, he was able to affirm that in each case the mucosa was completely reproduced, so that from these three cases he arrives at fifteen days as a minimum limit. In seven other cases he fixed upon the first menstrual period after curetting as a sign indicating that the uterine mucosa

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was physiologically active; in these cases he found that normal menstruation occurred twenty, nineteen, eighteen, twenty-one, twenty-two and seventeen (two cases) days respectively after curetting. Reckoning the first fecundation followed by full-term pregnancy as a more certain sign that the mucous membrane has been healthily reproduced, Bossi found that in seven cases fecundation occurred twenty five, twenty-eight, twenty seven (two cases), twenty-six and twenty nine days after curetting. Experiments on dogs gave a considerably longer period for repair; this was probably due to the greater severity of the operative technique on animals. Notwithstanding the evidence of these figures, Bossi would still recommend a period of at least sixty days' sexual rest after curetting.—*Brit. Med. Jour.*

The Acute Infective Diseases and Abortion.—Klautsch (*Munch. Med. Woch.*) asserts that pregnancy may here be terminated either by the death of the fetus or, as less frequently happens, by premature uterine contractions. The fetus may die owing to:

1. Deficiency of oxygen.
2. Alteration in temperature.
3. Direct transmission of the infection.

These conditions may be combined.

The inconstancy of the transmission of the infection Klautsch explains by the circumstance that it can occur only when the normal connection between the maternal and fetal circulation is disturbed. Premature pains may be caused by:

1. Increased bodily temperature.
2. Altered blood.
3. Changes in the uterine mucous membrane, as an endometritis exanthematica.
4. Toxines present in the blood.

If the deficiency in oxygen occurs rapidly, the fetus dies; if more gradually, pains are induced. In typhoid fever abortion occurs in more than half the cases, and the fetus is mostly born dead, usually from the transmitted infection. Cholera is not transmitted to the fetus, the death being here due to the altered blood, to an endometritis, to a diseased fetal placenta, and to temperature variations. In measles the fetus rarely dies. In severe malaria the fetus is more often born alive but soon dies of malarial cachexia. In pneumonia the death of the fetus is not uncommon and is due to asphyxia. Variola frequently kills the fetus, yet many are born alive. As regards the pains, the fetus may be expelled in variola, even during the suppurative stage; in malaria after the paroxysm; in erysipelas most often when the eruption appears; in cholera during the transition stage; in influenza soon after the onset of the febrile symptoms; in pneumonia on the third or fourth day. In typhoid fever the abortion may be accompanied by much hemorrhage or strong contractions and little hemorrhage. In cholera the hemorrhage is profuse and the contractions are violent. The fetus is mostly much more threatened by the altered temperature, disturbed circulation, and pathological changes in the endometrium than by the transmission of the infection.—*Univ. Med. Mag.*

Death From and After Post-Partum Hemorrhage.—Tarnier (*Jour. des Sages Femmes*) teaches that flooding after the application of the forceps must always be expected, since the instrument is usually employed because of uterine inertia, a source of hemorrhage. The danger comes when the placenta is expelled. Tarnier, when called to apply the forceps for a colleague in private, used to leave before the delivery of the placenta. In consequence he was very often called back. He makes these observations in respect to a robust woman who suffered from uterine inertia, and was delivered by forceps. There was considerable flooding, but not so much as to lead to expectation of bad results. The patient went to sleep, but awoke a few hours later and complained that she was suffocating. There had been no fresh hemorrhage. She very soon died. At the post mortem examination miliary tubercle was found disseminated in abundance over the lungs, pleura, liver and spleen. There was no evidence of insufficient blood in the system, no embolism, and no blood retained in the uterine cavity. The previous flooding, quite insufficient to harm a sound constitution, proved enough to kill this patient. Yet externally she looked healthy. We must be slow, says Tarnier, to find fault with a colleague for losing a patient after flooding. Had the above case occurred in private and no necropsy held, the obstetrician would certainly have incurred more blame than he deserved.—*Brit. Med. Jour.*

NOTES AND ITEMS

Fined for Contempt of Court for Refusing to give Expert Testimony Without Remuneration Therefor.—The decision of Judge Creighton in the January, 1895, term of the Circuit Court of Sangamon County, involving the principle of the payment of fees for expert testimony brough by the Springfield (Ill) Medical Club, is of interest to the medical profession (*Jour. Amer. Med. Ass'n.*).

As a test case an appeal has been taken to the Appellate Court of the Third District which convenes in May. Eventually it will be carried to the Supreme Court.

In a suit for damages for injury caused by a defective sidewalk, brought by Olive Purdy against the City of Springfield, Illinois, Dr. J. N. Dixon was called as an expert witness on the part of the defendant, and as an expert only, and when asked a hypothetical question, declined to answer on the ground that an expert witness is entitled to a different and greater compensation than an ordinary witness is allowed, and that an expert is not required to give expert testimony without compensation as an expert, unless a reasonable compensation shall

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have been paid or provided for; that he had not been paid nor offered anything for compensation for his expect or professional opinion in the case, a fee (of $10) having been asked for and expressly refused.

The judge said: It is the opinion of the court that you are not entitled to receive any such fee, but it is your duty to testify as an expert witness.

The witness still refusing to answer, the judge ordered that the hypothetical question be again put to the witness with the warning that if he should refuse to answer he would be held in contempt, saying:

The court is of the opinion that it is the duty of every person summoned as a witness in this State, to obey the process of the court and to testify, and that it is wholly immaterial whether the man be called from his labor as a mere laborer, or called from his bank, or called from his store, or called from a lawyer's office, or called from a doctor's office; it is the duty of every citizen to respond to the process of the court and answer as a witness, and give the court the benefit of any knowledge he may have of facts, or any knowledge he may have of science or otherwise, which will be of benefit in determining the truth in the controversies that arise between litigants in this State, so far as that can be done by simply giving testimony in open court.

Of course the court has no power to compel an expert to make an examination outside of court, or to prepare himself to testify, but so far as the witness is able to respond to proper questions propounded to him on the trial of a cause, while he is upon the witness stand, without prevously making special preparation or examination to enable him to answer that particular question, I think it is his duty to answer. Especially the court holds is that true of physicians. Physicians in this State are favored children of the State; a department of the State government is maintained very largely for their benefit; they hold a license to practice their profession and practice by grace as well as by right, and are so hedged about and protected by the laws of the State, and by public opinion and confidence, that in five minutes of time a doctor may earn more than an ordinary laborer could earn in a day, and may continue to earn such fees all day long, even on a day he may be required to attend court, except the hour or so devoted to attending on the court. Very much of that is because of the laws of the State which nurse their profession, and by grace which the State and society extends to them in regard to their profession, and when the State through its court calls upon them as experts to help it in an hour of need, they ought to respond as cheerfully and promptly as any class of citizens in the State. The farmer who knows how to plant corn and raise hogs is an expert, the banker is an expert, the section hand on the railroad is an expert, the merchant is an expert, every citizen who is of any value to himself or anybody else is, in some field an expert, and may be called upon sometimes to testify as an expert, and there is no reason why one class should have different rights or other rights than every class has. It is absolutely impracticable to provide a system of expert fees for every class; the banker might claim he could earn a hundred dollars a day, the merchant might claim he could earn fifty dollars a day by attending to his business, the ditch digger might claim he could earn ten dollars by digging in his ditch, and so on along the line. A system of expert witness fees which would give every man who is called upon to testify as an expert, professional compensation would make the administration of justice absolutely impracticable; would amount to requiring the litigant to purchase justice, which the constitution forbids. There is no law in this State that provides for paying experts professional fees, that is, when they are not called upon to make particular preparation outside court for testifying in the case. If a man who has a case to try wants an expert to examine something outside of court and hires that expert to do it, it is just like hiring a man to do anything else, and whatever he agrees to pay him or whatever the service is reasonably worth he must pay, the same as when any other service is performed under contract or by request. The court could not make any person go outside the court to do any act to qualify himself to testify in any particular case, but the court can compel witnesses to come into court and compel them to answer, so far as they are able to do at the time, every proper question put to them, and that is as true of expert witnesses as of any other, and it is the opinion of the court that this witness ought to answer, and it is the order of the court that he shall answer.

The witness declining to answer, the court found him guilty of contempt fixing his fine at $25.,

At a meeting of the Springfield Medical Club held March 27, 1895, the following preamble and resolutions were presented by the committee appointed at a previous meeting and adopted by the society:

WHEREAS, physicians are summoned at times before the courts to give answers to hypothetical questions, independent of a personal knowledge of the facts in the case, answers which impose unusual responsibilities and to this extent are different from the ordinary testimony concerning questions of fact, and on this account are believed to be worthy of greater compensation; and

WHEREAS, in a recent action in the district court it was developed that a judicial opinion of the highest courts in this State on the question of unusual compensation for expert testimony has not been handed down. Therefore, be it

Resolved, That the appeal of Dr. J. N. Dixon from the decision rendered in the District Court should be supported by the medical profession in order that the point of law involved may be definitely determined; and,

Resolved, That this preamble and resolution be submitted to the members of the profession in this State, and the different societies, and their financial aid be requested.

L C TAYLOR,
GEORGE F. STERICKER,
GEORGE N. KREIDER. } Com.

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ORIGINAL ARTICLES

Muscular Advancement for Squint, With Presentation of Cases.

BY T. E. MURRELL, M.D,

Professor of Ophthalmology, Barnes' Medical College, St. Louis, Mo.

Read before the St. Louis Medical Society, April 13, 1895.

The correction of strabismus is not as simple as is often supposed by those inexperienced in eye surgery. The very best operators are frequently disappointed in the results obtained by an operation performed in seeming accordance with the strictest requirements of the case. And even at best the percentage of cases in which monocular vision is obtained is comparatively small; so that the result is chiefly a cosmetic one after all. But even this being so, the gain in appearance is worth all the pains to the person successfully operated upon.

There are so many points to consider before doing a squint operation that no one should undertake it who is not prepared to meet any unexpected results that may arise. The performance of the muscles after a tenotomy can not always be accurately foretold, a simple division of a tendon in one instance producing little or no effect; in another causing over-correction. Nor is this to be judged by the power of mobility lacking in the one instance, or in excess in the other. Of course, these differences in result are to be met at the time by such modifications of the operation, or such correcting measures, as the operator may, from his experience, choose to adopt. There are two methods of correcting strabismus by surgical means; the one a tenotomy of the shorter muscle, the other the advancement of the longer, or both. To Critchett is credited the first operation of bringing forward the longer muscle, the steps in which operation, as first devised by him, are still described in the text-books, and the one commonly done until very recently. This operation was devised chiefly for the correction of divergent strabismus caused by an over-correction of a once converging squint. The method consists in dissecting up all the tissues, including the muscle to be advanced (the internal rectus, usually), and passing five sutures deep through the muscle or overlying fascia, well toward the inner canthus, and the other ends of the sutures through the conjunctiva, one each passing above and below, respectively, to a point opposite the vertical diameter of the cornea. The three remaining sutures are passed through the strip of conjunctiva left near the cornea. The external rectus tendon now being divided the sutures are tried, bringing the muscle and all the included tissues forward towards the cornea. A portion of the muscle and tissues, more or less according to the effect desired, is cut off so as to regulate the amount of advancement. In order to insure the union of the muscle in its new position the eye is drawn into a position of extreme convergence for one or two days by a suture passed through the tendon of the external rectus and fastened across the nose. Experience with this operation has proven the necessity of this guy to the eye, for the sutures being held only by the fragile conjunctiva are sure to cut through it and allow the muscle to slide back, thus greatly diminishing the result, if not spoiling it entirely.

While fairly successful in many instances, this operation is difficult to guage, its results are very uncertain and very great reaction sometimes follows it. Many modifications of the advancement operation have been made in recent years by different men, each claiming particular advantages for his particular method. Fuchs, after detaching the muscle, inserts two sutures through it and through the conjunctiva above and below the cornea, nearly the same as in Critchett's operation, only using fewer sutures. On account of the unreliable hold the sutures have on the conjunctiva, nearly all operators now make them dip well into the sclera so as to get a more secure support. Schweigger uses the catgut ligatures and passes them through the muscle on the one side and through the scleral end on the other, and cutting off such portion of the muscle as he deems sufficient, which he measures very carefully, he re adjusts the shortened muscle to its original scleral attachment. Wecker leaves a few central strands of the muscle undivided, being a partial lapping operation. Noyes uses three sutures passed through the detached muscle and over-lying tissues, and having cut off a part of the muscle he brings it forward by taking three deep bites with the needles into the sclera near the corneal margin, and

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ties the threads. Knapp operates similarly, using two double sutures through the muscle, when cut, make four, and these are inserted in the episclera near the cornea. Prince's method of suturing is still different. He passes a loop of thread through the sclera near the cordea, and ties it. This serves as a pulley. Having loosened up the muscle, one suture is passed through it once or twice and tied so as to hold it securely, and then one end is passed through the loop and tied to the other end in a bow-knot, the amount of result desired being graduated by the extent to which the muscle is brought forward. If found to be excessing the loop can be loosened and re tied, or if not sufficient it can be tied together. This, of course, within a few hours, before adhesion has taken place.

The latest modification is not to cut the muscle at all from its tendinous attachment, but to lap it and thereby to shorten it. This does away with one very great risk, and that is a slipping of the muscle forward, a result of not infrequent occurrence by the older methods where the fragile conjunctiva was depended upon to hold the sutures, but comparatively rare since the sclera itself has been made to receive them. This shortening of the muscle by lapping can be done, of course, only in those cases where the muscle is elongated, and not where it is retracted from a faulty tenotomy previously done. The lapping operation, which I have now done several times, is performed after this manner: A vertical incision is made in the conjunctiva and capsule of Tenon well exposing the muscle. A hook is passed under it and drawn up toward the cornea until arrested by its attachment to the sclera. A second hook is passed underneath and drawn well toward the equator of the eye. Between these two is considerable exposed muscle. This is seen to be well freed from attachments on either side. Having armed the needles with a silk suture, one of the needles is made to enter the muscle underneath, at such distance from the tendon as we wish to shorten it, and is brought out on top, then through and out again, the last time coming out underneath the muscle at the opposite side of beginning. The thread is pulled to about its center at the first insertion. Each needle is next made to pass through the fold of conjunctiva towards the inner centers so as to bring it forward with the muscle and close the conjunctival wound. The two needles are then made to take a deep bite in the sclera coming out one or two millimeters from the cornea, being careful that they are in exact line with the tendon and that they do not go entirely through the sclera. The two ends are strongly tied while the eye is rotated in the direction of the shorten ing. The opposite muscle, if it be divided, should be severed before tying the suture.

The suture should remain in fully a week, and in the lapping operation it is better to remain in from ten to fourteen days. The sutures that I use cause no irritation whatever, however long they remain. I prepare them myself. I use a good quality of white spool silk, of suitable size. I boil the whole spool for twenty minutes or more and then remove it from the water, allowing it to drain a little, and then drop it into a wide-mouthed bottle containing equal parts of olive oil and campho-phenique. It remains in this until used up. This greatly strengthens the thread, it is thoroughly aseptic, improves with age and is absolutely non irritating.

This is only a modification of several operations, for which I claim no credit. It is almost identical with the one suggested by Dr. G. C. Savage. Several ophthalmologists have of late, advocated advancement in place of tenotomy in ordinary squint. It has been thoroughly tested and the simpler operation, again, has the most in its favor. Dr. Knapp recently said, before the New York Academy of Medicine, that he had done a great many advancements in the last nine years, but that he had gradually gone back to the simply tenotomy. Dr. Gruening of New York, dispenses with advancements, even in high degrees of divergence where it is considered so essential, by fixing the two eyes in extreme convergence with a suture tied through each internal rectus tendon tied across the nose after tenotomy of both external recti. This suture is allowed to remain from 12 to 24 hours. It is questionable whether the best range of motility is given to the eyes by this operation. In all cases of excessive squint, amounting to thirty degrees or more, more satisfactory results are to be gotten from an advancement of the longer muscle with a tenotomy of the opposing muscle of the same eye. If it amounts to forty five degrees or more it is better to make the advancement operation on both eyes, but at different times. There are cases of squint, not paralytic, in which a free tenotomy is followed by almost no result. In an article in the last *Archives of Opthalmology*, which is just from press, Schweigger reports a number of cases on whom after a free tenotomy, the result was nil. In these cases the advancement of the opposite muscle is successful. That there is a wider range of motion after advancement than after tenotomy in ordinary squint is, in my opinion, more theoretical than real. I have never done an advancement in which there was a diminished range of lateral movements of the eyes.

I should like to present two cases illustrating the operation of advancement.

This man, Mr. W., aged 27, had a divergent strabismus of fully sixty degrees, fixation being with the right eye. His vision is, right eye $^{15}/_{200}$ left eye $^{15}/_{200}$ (?). He had a highly marked rotary nystagmus, and has imperfect fixation with right eye and none at all with left. His strabismus, nystagmus and amblyopia have existed through life, and are due to extensive choro-retinal atrophy in the macular region of both eyes. The want of fixation made the result doubtful, but I expected only improvement in his looks. I first advanced the left internal rectus with tenotomy of the external rectus, on March 30, 1894. On April 19 I advanced the internal rectus of the right eye and divided the external rectus tendon. The result was, when the second operation

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was finished, about as you see it now. At times the eye looks a little convergent, at other times straight. The result is evidently as good as could be expected with such poor vision and so much nystagmus.

In this case the muscles were lapped and not severed. If you will examine him you will find no scar or thickening over the left internal rectus, and only a slight thickening over the right.

The other case which I present is a more recent one. Mr. J., aged 36, was operated for convergent strabismus when eleven years old. He came to me about three weeks ago in the following condition: Strabismus divergens, right eye, of thirty-five or forty degrees.

V.=O.D. $^{15}/_{70}$ (?), O.S. $^{15}/_{20}$.

Hypermetropia=4.50 D. O.U. with +4, S.V =O.D. $^{15}/_{70}$ O.S. $^{15}/_{16}$.

I opened the conjunctiva in the usual way over the usual side of the globe and exposed the point of attachment of the muscle, which was much further back than normal, having greatly retracted after the former tenotomy.

After exposing the muscle fully and passing a hook under it, it was found too short to lap, so, after securing it with the single suture passed through it near its tendon, it was separated from the sclera and brought forward and fastened to the sclera about the position of its original attachment. Its reaction followed, and the suture was removed on the eighth day. There is a little remaining thickening over the place of re-attachment, as you will see, but it is not conspicuous and will, in the course of time, almost entirely disappear.

After this operation the eye is dressed septically and the patient is given his liberty. He calls at office or dispensary daily for dressing and examination.

The three essential points in the operation are:

1. Ligating the muscle, as it were, by passing the suture in and out several times, and then attaching it to the sclera as a fixed point. The conjunctival wound is closed by the same suture and the knot is on the exterior, so as to be easily divided and removed.

2. No second suture is required for the conjunctiva, as by Savage's method.

3. No confinement to bed or room even is required, and the unoperated eye is left open.

[Discussion of this paper in next week's issue.]

DR. JOHN W. VAUGHAN of the Barnes Medical College, commends Zumo-Anana (Pine-Apple Digestive Wine) as a stimulant tonic and digestant for the aged.

ST. LOUIS, MO., March 8, 1895.

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JOHN W. VAUGHAN, M.D.

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The Trend of Modern Therapy.

During the first half of the last decade enthusiasm was running high in medical circles over the antipyretic action of some of the coal-tar products. For a while they were used indiscriminately by many practitioners in all pyretic conditions. The more careful, cool-headed and experienced physicians, however, soon warned against their use in cases where the temperature does not rise to a dangerous height. Experience has shown that they were right and at present antipyretic drugs have a very limited use.

Whenever there is a reaction from any erroneous theory the danger lies near of falling into the opposite extreme, and experiments are now being made with a view of ascertaining the usefulness of a high temperature for the speedy cure of a disease. It is quite possible that in some diseases a high temperature accelerates recovery by influencing directly or indirectly the *materies morbi*. In ancient times physicians considered fever as a very important factor in bringing about a favorable termination of a disease and very recently various authors have expressed their belief that a high temperature may be one of the agents by which the organism rids itself of the cause of disease. It seems

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very plausible that in affections which are caused by micro-organisms whose virulency is greatly reduced in the laboratory experiment by a temperature approximating that of high fever, the latter alone may contribute considerably to the final recovery of the patient, not taking into consideration the possible influence of a high temperature upon the vital processes in the tissues which may favor the production of substances inimical to the action of the *materies morbi*. On the other hand experience has taught us that in other diseases, characterized by high temperatures, a reduction of the temperature by innocuous means, such as judicious bathing, has a most favorable influence upon their progress and eventual termination.

It is not justifiable, therefore, to apply a general rule as to the treatment of high temperatures. In some diseases future experiments may prove that it is best to leave the temperature alone and in others a reduction of a high temperature may be beneficial. It will not do in this matter, as is the case in almost every other instance in medical practice, to try and find a rule which applies to every disease alike. Observations have been made by a few experimenters that in animals certain diseases (pneumonia, erysipelas) are favorably influenced by exposing the animals to a high temperature in a thermostat. Drs. Loewy and Richter, of Berlin, have recently published results obtained by an artificially increased temperature which, if verified, will have a decided influence in bringing this subject to the more general notice of the profession. The artificial high temperature was obtained in the animals by the Sachs Aronsohn brain puncture, which causes a lesion of the corpus striatum. As soon as the temperature of the animals had risen to 106° F., some were infected with chicken cholera, others with pneumonia and diphtheria. In general, the course of the disease seemed favorably influenced and in the case of pneumonia the result was surprisingly favorable, for when doses of the infectious material were used which were from twice to three times as large as an ordinarily deadly dose, the animals recovered and were kept alive. Exact researches with regard to the influence which an elevated temperature may exert upon the process of certain diseases are very scarce; for the present trend of investigations inclines almost exclusively toward a chemical, respectively bacteriological solution of the problem of determining some of the agents by which the *materies morbi* is made innocuous during an attack of disease by natural processes and by which a disease eventually gets well without therapeutic interference. Considering the difficulty of the task, much has been accomplished in this direction and it appears at present that the laurels in scientific therapeutics are principally to be looked for in the realm of organic chemistry. In many infectious diseases it has been observed that a very pronounced increase in the number of white blood-corpuscles takes place in the blood and the antitoxic products that are formed by disintegration of leucocytes form one of the agents which seem to arrest the progress of disease. Modern therapeutic efforts are therefore centered in two problems. The one has for its object the isolation of the products of reaction of an attack of bacteria and toxines, the antitoxines, the other the increase of leucocytes in the blood of the patient, in other words, the production of leucocytosis. It has been found that a leucocytosis may artificially be produced by the administration of small doses of pilocarpin and also by spermin. It is claimed even that a valuable remedy for tuberculosis has been discovered in the first named drug in consequence of this property. How much truth is contained in the latter assertion, the future will teach. Let us hope that a panacea for the cure of consumption has at last been discovered. It appears that the animal experiment, at least, has yielded positive results with regard to the curative property of an artificially produced leucocytosis in the case of tuberculosis. It is claimed by Loewy and Richter that the intravenous injection of pilocarpin and also spermin prevents, to a great extent, the usual symptoms of an artificially produced pneumonia. If pneumococci were injected after the production of a leucocytosis by these medicaments, rabbits which had received a dose three times as large as the one that would otherwise kill the animal recovered and, moreover, in the majority of instances there was little or no pyrexia produced and the disease took an exceedingly mild course, the animals showing but slight manifestations of disease. The therapeutic effect was not near so pronounced, however, when the leucocytosis was effected twenty-four hours after the infection with pneumococci, when only a considerable prolongation of life could be attained.

The occurrence of a leucocytosis in the course of an infectious disease has been claimed to be a favorable sign as to the termination of the disease. Also the artificial production of a leucocytosis has at present many advocates (in this country, the hypodermic use of nuclein has been advocated by Vaughn and others for the purpose of increasing the poly nuclear leucocytes in the blood), but the numerous investigations in this direction have not yet been sufficiently tested, discussed and verified to form a final opinion. Let us hope that the most sanguine expectations may be realized.

Dr. Alleyne. +

The medical profession of St. Louis mourns the loss of one of its oldest and most esteemed members, Dr. Jeremiah S. B. Alleyne who died, May 2, very suddenly at his home. He had retired feeling unusually well. He had spent the evening visiting his old friend, Dr. J. P. Litton. He walked home, and when he reached his residence was in excellent spirits, though complaining of being somewhat fatigued. He retired as usual, and arose about 5:30 to get a drink of water. He then returned to bed. At this time his wife asked him if he was unwell, and he replied that he was not. At 7 o'clock Mrs. Alleyne arose and attempted to awaken her husband, only to discover that he was dead.

Dr. Alleyne was born in Boston in 1826, and came to St. Louis in 1839. He was enrolled as a student of St.

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Louis University in 1842, receiving the degree of A. B. three years later. Upon the completion of his academic education he entered the St. Louis Medical College, from which he graduated in 1848. He has been practicing medicine in St. Louis ever since. He was a member of the faculty of the St. Louis Medical College for twenty years, and Dean of the college for ten years. He was subsequently connected with the Beaumont Medical College. He was Dean of the Barnes Medical College at the time of his death.

Dr. Alleyne leaves a wife and one daughter. The latter is Mrs. Fred M. Von Schrader, wife of Capt. Von Schrader, U. S. A., now stationed at Louisville, Ky.

Dr. Alleyne was universally liked as a physician, medical teacher and citizen. His sincerety, politeness and affability won him the hearts of all that came in contact with him and his departure has caused an irreperable vacancy in the ranks of the St. Louis medical profession. To the last day of his life he took an active interest in all matters pertaining to his profession which he loved and held high. He will continue to live in the memory of his many pupils, friends and colleagues.

Medical Association of Missouri.

The Thirty Eighth Annual Session of the Medical Association of the State of Missouri will convene in the Opera House at Hannibal Mo., at 10 o'clock A.M., Tuesday the 21st day of May, 1895. Sessions will be held morning, afternoon and evening, closing at 5 P.M. Thursday 23rd. Rates have been arranged on rail roads and at the leading hotels of the city.

Ample arrangements for social entertainment will be made.

Committee of Arrangements, Drs. Thos. Chowning, E. T. Hornback and J. S. Howell.

BOOK REVIEWS

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science. By Leading authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In Twenty Volumes. Volume II. Nutritive Disorders. New York: William Wood & Co. St. Louis: J. H. Chambers & Co. 1895.

Volume II of Twentieth Century Practice is in every respect the equal of Volume I. Every chapter is treated in a most careful and exhaustive manner. The contributors have been most carefully selected and represent the best talent of the world; the different chapters being written by men who are authorities upon the subjects allotted to them. The practical arrangement of the subjects, the completeness and consideration of all the modern advances in the science of medicine and of everything that is of practical value make the Encyclopedia a work of lasting usefulness and merit.

The chapters of Volume II, which are classical monographs of the highest order are the following:

Addison's Disease, and Other Diseases of the Adrenal Bodies, by Sir Dyce Buckworth, London.

Diabetes Mellitus, by Carl von Noorden, Frankford, O. M.

Rheumatism, by T. J. Maclagan, London.

Gout, by Henry M. Lyman, Chicago.

Arthritis Deformans, by Archibald E. Garrod, London.

Diseases of the Muscles, by Dujardin-Beaumetz, Paris.

Obesity, by M. J. Oertel, Munich.

A Manual of Modern Surgery, General and Operative. By JOHN CHALMERS DACOSTA, M.D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia; Chief Assistant Surgeon, Jefferson Medical College Hospital, etc. With 188 illustrations in the text and 13 full page plates in colors and tints, aggregating 276 separate figures. 1894. Philadelphia: W. B. Saunders. St. Louis: J. H. Chambers & Co. Price, $2.50, net.

Surgical cases with which the surgeon and general practitioner comes in contact most frequently, have been considered in this work in a concise and clear language. As the book is intended to stand between the complete but cumbrous text-book and the incomplete but concentrated compend it will be particularly welcomed by the busy practitioner and student. The manual presents the fundamental principles as well as the chief operations and accepted methods of modern surgery, while the specialties of ophthalmology, gynecology, rhinology, otology and laryngology have not been considered. The print and illustrations are good and the general make up of the book is such that it will be welcomed by every practitioner.

MEDICAL SOCIETIES

Third International Congress of Dermatology.

TO BE HELD IN LONDON, AUG. 4 TO 8, INCLUSIVE, 1896.

LIST OF OFFICERS.

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Vice-Presidents—British: President of the Royal College of Physicians; President of the Royal College of Surgeons; President of the Royal College of Physicians of Ireland; Director-General of the Medical De-

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Austria—Prof. Kaposi, Prof. Neumann, Prof. Lang, Prof. Hans von Hebra, of Vienna; Prof. Schwimmer, of Buda Pesth; Prof. Pick and Prof. Janovsky, of Prague; Prof. Jarisch, of Gratz.

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Denmark—Prof. Haslund, of Copenhagen.

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Balkan States—Prof. Kalindero, of Bucharest.

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Secretary General—Dr. J. J. Pringle, 23, Lower Seymour Street, London, W.

REGULATIONS.

1. All duly qualified medical men, British or Foreign, or others interested in science invited by the Council, who shall have paid the fee of £1 sterling (the equivalent of £1 sterling is: French, 25 francs; German, 20 marks; Italian, 25 Lire; American, 5 dollars), and who shall have enrolled themselves, shall be members of the Congress and entitled to the volume of Transactions.

2. The official languages of Congress shall be English, French and German, but with the permission of the President, members may express themselves in the language with which they are most familiar.

3. The proceedings of the Congress shall be embodied in a volume of Transactions, edited by the Executive Council.

4. Communications relative to membership, papers or other matters connected with the Congress, should be addressed to the Secretary General, Dr. J. J. Pringle, 23, Lower Seymour Street, London, W., or to one of the Foreign Secretaries.

5. The fee for membership shall be payable in London, at or before the opening of the Congress.

It will greatly facilitate the work of the Executive if the fee is forwarded as soon as possible after May 1, 1896.

6. Members who are unable to attend the Congress shall receive the volume of transactions.

7. The subjects treated of shall be of two orders (a) Those selected by the Executive Council and introduced

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by gentlemen chosen for that purpose by the Council; (b) Those selected by individual members themselves.

8. Subjects selected for debate by the Council shall take precedence over those selected by the members.

9. The sittings of the Congress shall take place from 11 to 1 in the forenoon, and from 3 to 5 in the afternoon, of each day.

10. There shall be clinical demonstrations of patients every morning from 9 to 10:30, and every afternoon from 2 to 3.

11. Members contributing papers must submit an abstract of them to the Secretary-General on or before May 1, 1896, which will be printed either in full or in part, and embodied in the general programme of the Congress which will be distributed at its opening.

12. At every debate precedence will be given to gentlemen who have communicated beforehand their intention to take part in it.

13. No papers lasting more than twenty minutes will be permitted. Speeches will be strictly limited to ten minutes each. MSS. of the papers read must be left with the Secretary General before the end of the sitting. The Executive Council shall decide as to the entire or partial publication of such papers in the Transactions of the Congress.

J. J. Pringle, Secretary-General.

ABSTRACTS

MEDICINE.

Modern Hydropathy—Its Relation to General Therapeutics.—The vasomotor influences, as shown by changes in the systemic capillary arterioles, show the great importance they have in determining various pathological conditions. These vasomotor influences play such an important part that they might almost be called the key to the modus operandi of hydrotherapy. Through them we can modify the vascular conditions present in disease, to which is attributable the efficacy of hydriatic measures. The other elements, such as impressions on innervation, local and general temperature, cardiac action, muscular tone, the digestive and nutritive processes, etc., not being directly connected with vasomotor effects, are of secondary importance. Apart from mechanical impressions the therapeutic value of water depends upon the means it gives of bringing exact temperatures to bear upon the whole or part of the body. The sedative and narcotic properties of water at indifferent temperatures must not be overlooked. A tepid bath at bed-time cures some cases of insomnia, due to the saturation of nerve ending and resulting lessened conductivity.

Irritability may be increased or lessened by action of thermal stimuli upon innervation in three different places:

1. At the point of application.
2. In the central organ.
3. By reflection in other parts.

The fact is being established that definite cutaneous areas that do not overlap are connected by nerves of temperature and common sensation with spinal segments, and thence, through the sympathetic, with various internal organs. Besides these there are probably many distinct parts of the body which have a positive or negative vasomotorial relation—as the feet and the head, the hands and the organs of respiration. Through these the metabolic and functional conditions of diseased tissues can be modified by appropriate thermal and mechanical stimuli.

The effects of a given thermal stimulus upon the superficial and deeper tissues are no more important than the effects between the central and the peripheral positions of the point of application. Cold cutaneous applications produce a reflex acceleration of muscular circulation and metabolism. Ice applied to the arm near the elbow produces a contraction of the radial and ulnar arteries; and a lesser temperature in the hand causes opposite effects in the axilla. Local contraction or dilatation of arterioles is accompanied or followed by contrary action of vessels elsewhere. A cold bath in the treatment of hyperpyrexia operates as a true antipyretic and not as a mere antithermal procedure. The more suddenly heat is withdrawn and the greater the cutaneous nerve stimulation by cold, the more rapid is the reactionary rise of temperature. The wet pack abstracts heat slowly and stimulates mildly, hence the onset of the reaction is correspondingly slow. Another method is to keep the cutaneous vessels dilated during the heat abstracting process; this can be done by friction under the wet sheet.

Contrast this with the hydropathic treatment of obesity. In this the object is to stimulate combustion of non nitrogenous elements. If then, as physiologically established, such combustion is an invariable accompaniment of muscular activity, the reduction of fat by combustion is accomplished by the exaltation of muscular tone and function. The reflex effects produced in the muscular layers by external thermal stimuli are proportional to the intensity of the cutaneous nerve stimulation. The apparent or felt refrigeration, and not so much the actual, will determine the amount of fat reduction. Hence the sensibility of the cutaneous nerves ought to be increased before the application of cold by previously making brief hot applications, as for instance, a Turkish bath followed by cold or cool needle, spray or shower baths.

The effects of drinking cold water may be summarized as follows:

1. Immediately after the drinking of cold water the pulse-rate is lowered, probably by stimulation of the pneumogastric fibers, but soon returns to the normal.

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2. The temperature falls in the stomach and also, to a noticeable degree, in the rectum, a fact which may find clinical application in inflammatory conditions of the pelvic organs; conversely, cold enemata reduce the temperature of the stomach.

3. Katabolic processes are stimulated, and there is true diuresis, the excretion of urea, as also of the other urinary constituents, being markedly increased.

4. Peristalsis and the portal circulation are stimulated, and also (in consequence, perhaps, of the latter effect) the excretion of bile.

5. Boecker has attributed to water drinking an improvement in the respiratory qualities of the red blood-corpuscles.—C. J. Whitby, M.D., in *The Lancet.*

A Stimulant Antipyretic, Analgesic and Expectorant.—Sir Benjamin Wood Richardson says in *The Asclepiad:* "The substance to be used medicinally for the purpose of reducing temperature must have three qualities: It must be antiseptic; it must be volatile; it must have the slightest solubility in blood. If it is not antiseptic, it is negative in its action as a suppressor of heat; if it is not volatile, it accumulates in the blood and tissues, acts then as a foreign body, toxic in its nature, and itself causes secondary symptoms which are mischievous and unnecessary, taxing active eliminative organs, like the kidney, to an undue degree; if it be very soluble in the blood and in the fluids of the tissues, it is the more objectionable on account of its fixation and slow elimination.

"The value of ammonia rests largely on its possession of the three qualities just enumerated. It is a splendid antiseptic, is volatile, but too soluble and too powerful as a solvent. Given in sufficient doses to check the animal fire, it dissolves the red corpuscles, prevents the free absorption of oxygen from that effect, and by its presence in the blood also tends to prevent oxidation."

The well known depressant effects of the ordinary antipyretic coal-tar products constitute a decided bar to their acceptance as satisfactory antipyretics. If now we combine the most efficient coal-tar product with a stimulant ammonia which in itself is a splendid volatile antiseptic antipyretic, but "too soluble and powerfull" when used alone, we then have something nearer an ideal antipyretic. Phenylacetamide chemically combined with ammonium carbamate and some simple basic, alkaline salt, forms a perfect chemical union. That such a chemical can be produced is demonstrated by the manufacturers of ammonol.

This new coal-tar product differs mainly from others in that it complies more closely with the conditions we have previously mentioned. It is an antiseptic. It is volatile. It is practically insoluble in the blood, and above all it is a stimulant having no depressant effects.

THE THERAPY OF AMMONOL.—A practical clinical test of ammonol seems to show that it is one of the most valuable of the recently devised coal-tar products. Its chemical nomenclature is ammoniated phenylacetamide. The ammonia is probably in combination with some basic salt into which it has entered during the progress of manufacture. Be this as it may, the presence of the ammonia vastly increases the therapeutic effect of the coal tar derivative over its curative range, and tends to neutralize and even completely antagonize the depression which usually follows the administration of the synthetical coal-tar derivatives.

The remedy is an excellent one, when given in doses of five or ten grains at intervals of an hour or two for the reduction of temperature, and the relief of neuralgic and rheumatic pains. It stimulates the liver and intestinal secretions, unlocking as it were the excretory organs which in febrile and neuralgic conditions are usually inactive. After four or five doses, copious bilious movements usually occur and show its cholagogue effects. These latter results prove it valuable for the treatment of the condition called "biliousness" when there is a furred tongue, a foul breath, constipated bowels, and scanty, high colored urine.

Ammonol is almost a specific for removing the effects of an alcoholic debauch, or for counteracting those following the excessive use of narcotics. It quickly relieves the nervous tremor, the headache and the digestive organs, allaying nausea and vomiting. For this purpose ten or twelve grains of the drug given at intervals of two hours for three or four doses usually suffices, though it is often a good plan to commence with a single large dose, say of fifteen grains or even of twenty grains, and follow it with doses of three to five grains administered at hourly intervals of three or four hours. Two doses of ten grains each, given at half an hour to an hour apart, rarely fail to relieve the most obstinate cases of migraine, though generally a less quantity is sufficient. A good plan is to give a single dose of fifteen grains, and follow it with five grains hourly until the headache is relieved, or until the patient has taken three doses.

In myalgia or muscular neuralgia it is very effective, though the best results will be obtained by a different method of exhibition. In this case ten or fifteen grains should be given four or five times during twenty-four hours until the pain is relieved. The effect of ammonol in contagious influenza (la grippe), will be found very satisfactory. It quickly relieves the muscular and joint pains, the depression and fever. For this purpose three to six grains given hourly will be found effective, though this dosage of course varies with the severity of the case and the condition of the patient. Ammonol is said to be an excellent remedy for dysmenorrhea. Obstinate vomiting, after the irritating circumstances causing it have been removed, may be controlled by its use. Here doses of two or three grains are sufficient, and this should be given after each paroxysm. The vomiting of pregnancy may be successfully treated in the same manner. Hysteria, especially when it is accompanied by eructations of gas and abdominal distension, is quickly relieved by a few doses of this agent. Ten grains at once, followed by two five-grain doses at hourly or half hourly intervals, will attest this.

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In hyperacidity of the stomach and gastralgia, quick relief can be had by giving two or three doses of from five to ten grains, at intervals of half an hour to an hour.

Ammonol, as has been stated, is a stimulant to the secretions. It is an expectorant of more than ordinary power. The effect is doubtless due in some measure to the ammonia it contains. For this reason it is serviceable in pneumonia and bronchitis.

It may be given alone or in combination with other expectorants. The following prescription is useful as a stimulating and soothing expectorant mixture: Ammonol, Pulv. Ipecac Co., aa 5 grains. Make one powder. Take every four hours.

In catarrhal and nervous dyspepsia the following prescription will effect excellent results: Ammonol, 5 grs., Soda Bicarb., 10 grs. Make one powder. Take an hour before meals.

In cases of gastric and intestinal catarrh, or in the jaundice caused by the latter, ammonol acts quickly when given in three to ten grain doses four or five times daily.

It is perhaps best to exhibit ammonol in powder, tablet or pill form.

Ammonol may be advantageously combined in powder, tablet or pill with caffeine, morphine or quinine, and the following excellent formula for migraine, for those suffering from over effect of narcotics or alcoholic stimulants, and from nervousness resulting from excessive brain work: Caffeine, 1 grain; Ammonol, 5 grains. Make one powder. Take one or two for headache or nervousness.

For Coryza: Camphor, ½ grain; Ammonol, 5 grains. Make one powder. Take one every two or three hours.

The preceding formula is also excellent for aborting a threatened cold and will invariably act if taken early enough in the attack.

The effect of the salicylates is generally enhanced by combination with ammonol. Ammonol combined with sodium salicylate effected a cure in two cases of acute articular rheumatism where the salicylate given alone had failed. In these cases five grains of ammonol and twenty grains of the salicylate were given in Vichy four or five times daily.

The vegetable and mineral acids are chemically incompatible with ammonol, as are also the earthy salts. The depressant remedies generally, such as veratrum viride, aconite and other cardiac sedatives, antagonize its physiological effect. While no ill effects have been noted from large doses of ammonol, it is not desirable or necessary to give doses of over thirty grains at a single dose, or to administer more than a drachm during twenty-four hours.—*National Board of Health Magazine.*

The Influence of Fatigue on the Auditory Functions.—The *Presse Medicale* for March 16 contains an abstract of an article which was published in the *Archivo Italiano di Otologia* for 1894 (*N. Y. Med. Jour.*). In order to study this question, says the writer, the author made examinations of twenty-four bicycle-riders after they had ridden thirty-two miles in two hours and a quarter. Two of the men complained of subjective noises only, while in nearly all of them the perception of sounds by aerial conduction was less marked than in the normal condition, and Rinne's experiment showed negative results. In the riders who were subjected to an examination with tuning-forks a slight diminution in the perception of loud sounds was ascertained. The only lesion noticed was a slight hyperemia of the drum membrane.

The competitors were again examined after a rest of from two to seven hours, and in six of them the auditory power was found to be the same; in two it was not so good, and in the sixteen others it was better, the aerial perception having increased from a few centimeters to a meter and a half, and Rinne's experiments gave positive results. The men in whom the amelioration was the most marked, in whom, consequently, the hearing had undergone the greatest change, were those who had had little experience or training.

Physical fatigue, says the writer, evidently causes a temporary weakening of the auditory power. This fact demonstrates, besides, he says, that the effects produced by great physical exercise are not shown by muscular fatigue only, but they remotely affect the entire organism and especially the nervous system, and the special senses, on account of the delicacy of their functions, are more likely to reveal the effects. The enervation shown by birds of passage after a long flight is a phenomenon of the same nature as that observed by the author in the examination referred to.

The Treatment of Vomiting.—The *Province Medicale* for March 9 publishes an article in which the writer considers the question of the difficulty of controlling various kinds of vomiting. He recommends the following formulas, the first of which, according to Steffen, is useful in the vomiting of pregnancy: Distilled water, five ounces; tincture of iodine, twelve drops. A tablespoonful of this in half a glass of sweetwater is to be taken every two hours. The same author recommends the addition of a few milligrammes of morphine hydrochloride to each spoonful, or an ounce of the distilled water may be replaced by an ounce of cherry-laurel water. The *Centralblatt f. de Gesammte Therapie*, in one of its last numbers, recommends the two following formulas:

1. Chloroform, nine hundred grains; tincture of iodine, a hundred and twelve grains. Five drops of this are to be taken every night in a glass of Seltzer water.

2. Distilled water, three ounces and a quarter; cocaine hydrochloride, half a grain; antipyrine, fifteen grains. A teaspoonful may be taken every half hour.

The following procedure, says the writer, in which three solutions are used, has often been employed successfully:

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1. Alcohol, a hundred and fifty grains; menthol,

eight grains; tincture of nux vomica, thirty grains.

2. Tincture of iodine, a hundred and fifty grains.

3. Saturated chloroform water, three ounces.

Every half hour, or every fifteen minutes if necessary, the patient should take a dessertspoonful of the chloroform water, which may be diluted with iced Seltzer water, after having added ten drops of the first solution to it. If this is not sufficient two drops of the tincture of iodine may be added to each spoonful. Finally, if it is necessary, from two to three drops of a one-in-fifty solution of morphine or cocaine may be added to these formulas. These two solutions are usually employed for subcutaneous injections. It is well to substitute occasionally for one of these medicaments from two to four drops of the ordinary solution of antipyrine for cutaneous injections, according to the following formula: Antipyrine, seventy-five grains; cocaine hydrochloride, two grains and a half; distilled water, a sufficient quantity to make ten cubic centimeters. If these different medications fail, says the writer, the physician may resort to the following therapeutic measure, which is very simple and has been successfully employed by M. Robin in serious cases: Apply a small blister to the pit of the stomach, also administer a small suppository containing a grain and a half of powdered crude opium and a sufficient quantity of cacao butter once or twice during the twenty four hours. The vomiting is very often arrested, even if it is the serious vomiting of typhoid fever. Sometimes, also, inhalations of oxygen are useful.—*N. Y. Medical Journal.*

SURGERY.

A Case of Anesthesia With Death, and Attempted Extortion Successfully Resisted.

Eden V. Delphey, M.D., of New York, in a paper read before the eleventh annual meeting of the New York State Medical Association, last October, says:

Among the many trials, troubles and tribulations of members of our profession, is the one wherein some designing and unscrupulous person thinks he sees a short road to wealth by mulcting the family physician in a suit for damages.

Having recently, with a brother practitioner, been the victim of such an attempt, having together successfully resisted the attempts at extortion in a court of law, and being informed that no case of this kind and character has ever occurred in this State, we think it best that a statement of the facts be placed on record.

On February 13, 1892, Dr. A. H. Goelet, of this city, asked me to go with him to see a patient and perhaps to give an anesthetic for the purpose of amputating a gangrenous finger. On arriving at the patient's residence and after removing the dressing we agreed that it would be inopportune to operate at that time. On March 19, following, while calling at the doctor's office, the patient came in and together we discussed the operation which was set for the following day, on which day, the 20th, we went to the patient's residence, began to give the anesthetic, and the patient died. Inasmuch as the facts and circumstances relating to the administration of the anesthetic, the attempts at resuscitation, etc., were brought out in the suit for damages, and are clearly and concisely stated in the hypothetical question, attorney's address and judge's charge, they will be recounted later in that manner.

A few days after this unfortunate occurrence, we were each visited by a representative of a so-called "Society for Protection from Personal Injury," who stated that a suit was about to be begun and tried to induce us to compromise the case, but knowing we had done no wrong, regretting the misfortune as much as any one, and having the welfare of other members of the profession at heart as well as our own, we declined to do so. Some little time later we were again visited by another representative, who was very ignorant and abusive in his endeavor to extort money.

The trial, after many days, finally began in the Supreme Court before Judge Traux, on Tuesday, April 24, 1894, and ended Friday, April 27, 1894, the jury bringing in a verdict in our favor.

The experts for the defense were: Drs. T. Gaillard Thomas, William T. Bull, Robert Abbe, J. West Roosevelt, Herman J. Boldt, Edwin B. Cragin and Fred C. Valentine, and the hypothetical question was as follows:

Hypothetical Question.

Q. Assume that a patient of about 52 or 53 years of age had gotten a splinter in the forefinger of his right hand; that it affected the bone, that gangrene set in, that he had septic symptoms; that he went to a physician's office one evening to have his hand dressed, and on examining it, the physician found that the bone could be taken out without giving an anesthetic, but he said he would not be able to bear the pain of it without an anesthetic; that the physician made an examination of his heart, his lungs, and his urine, and found that they were normal; that the physician attended with an assistant who was accustomed to give anesthetics to perform an operation of amputating the diseased finger; that while the physician was preparing his instruments the patient remarked: "Doctor, you are not going to give me chloroform, are you?" and the physician told him he would give him chloroform only in the beginning, as he would need less of the anesthetic; and the patient said nothing more; that the assistant also made an examination of his heart and lungs and was present and watched the physician when he made an examination of the patient's urine and coincided with his opinion of the results found by such examination, and that urine contained neither albumen nor sugar, and was normal. That the assistant asked the physician if he should commence with chloroform, and the physician said "Yes," and that then the patient was lying on the bed, partially undressed, prepared for the operation;

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that chloroform was administered by means of an Esmarch inhaler, and that the chloroform was dropped, drop by drop, on the inhaler from above; that about a half and not more than a fluid dram was used; that during the inhalation of the chloroform the patient began to resist, and threw his arms about the bed; that the physician sat on the side of the bed and took hold of the wrist of the sore hand so he would not injure it; when he became quiet and the physician turned away to prepare his instruments, and while doing so he heard the patient breathing stertorously, that chloroform was laid aside for about one or two minutes until there were signs of returning consciousness and the stertorous breathing had changed to quiet and normal breathing. That ether was then substituted for chloroform, and administered by means of a cone made of folding paper and towel, that shortly after the assistant asked the physician to help him, saying that the patient had stopped breathing. That the physician went quickly to the opposite side of the bed, and, with the assistance of another person in the room, elevated the patient's feet and suspended his head and shoulders over the side of the bed, so that the assistant could make efforts at artificial respiration. That the assistant worked on the patient to produce artificial respiration, by the assistant grasping him by the elbows, pressing them forcibly against the chest, then extending them over the head, pretty well back, and repeating this performance about twenty times a minute for about half an hour, but without avail, that only after the heart had ceased to beat were efforts to resuscitate discontinued.

Now, in your opinion, did or did not the physician and his attendant or assistant use the proper and usual course adopted by physicians and surgeons in such cases?

A. Yes.

Assuming the same state of facts, did or did not the physician and his attendant or assistant practice and observe the usual methods generally and ordinarily adopted by physicians and surgeons in such cases?

A. Yes.

Assuming the same state of facts, did or did not the physician and his attendant or assistant practice and observe the usual methods generally and ordinarily adopted by physicians and surgeons skilled in performing such operations?

A. Yes.

Assuming the same state of facts, did or did not the physician and his attendant or assistant practice and use the care and skill ordinarily used and employed by skilled physicians and surgeons in administering chloro form or ether?

A. Yes.

Assuming the same state of facts, in your opinion, had or had not the physicians committed malpractice?

A. Certainly not.

The attorney for the defense was Albert C. Aubery, of this city, and after thanking the judge for his fair decisions and the jury for their patient attention, reminding them that His Honor was judge of the law and they were sole judge of the facts, and that their responsibility was no light one, as on their decision hung the future professional hopes and prosperity of the defendants, he says:

Now, gentlemen, what is this action? By whom is it brought? Agninst whom is it brought? And what will be the result of your decision? These are questions to which I propose to call your attention, requesting the same degree of attention on your part to what I may say that you have already given to this case.

This action, gentlemen, is to recover the sum of $5,000 from the defendants by the plaintiff for alleged malpractice.

The plaintiff is the widow and administratrix of M. L., deceased. She sues as such administratrix, under the statute of the State of New York, claiming that amount of damages—mark you, gentlemen, damages!—for wrongfully causing the death of her husband. She claims that the defendants administered to her husband chloroform, a deadly anesthetic, in their capacity and occupation as physicians and surgeons, so negligently and unskillfully as to cause his death, thus depriving her and her children of their only support. She also claims that chloroform was administered to her husband by the defendants contrary to her husband's expressed request, and contrary to her request and that of their children. The husband of this plaintiff was afflicted with gangrene of the forefinger of his right hand. The finger was to be amputated. The defendants were employed to perform the operation. They deny all charges of negligence, or of other improper conduct. I think, gentlemen, you will agree with me that I have made a fair statement of the case, and by whom it is brought.

As to the question against whom it is brought, you, gentlemen of the jury, have seen them here. Ever since this case has been on trial—now the fourth day—the defendants have been in court, their future professional reputation dependent upon your decision. They fear not the result, for they conscientiously feel that there is not a man on this jury who will not decide this case under the solemn oath he took, when he was sworn as a juror, to render a true verdict upon the evidence.

After referring to the positions of the defendants in the community, he continued:

This suit, gentlemen, is not brought against a branch or limb of the medical and surgical profession, but against the root and tree of that honored profession. It is a blow struck at its very foundation. A blow which, if you shall hold is well aimed by your verdict for the plaintiff in any sum, however small, means a deadly blow to that profession. But I believe better things of you. I have in you full confidence that you will render a verdict which will send both of these defendants back to the bosom of their respective families, now anxiously waiting their return, to gladden not only their hearts, but one which will be flashed over the electric wires, binding State to State as one common brotherhood, to every medical society in this country, that these defend-

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ants are not guilty of malpractice; that they are not malpractitioners.

What profession, gentlemen, is more honored than the medical? I know of none. The physician comes nearer to the bosom of your family and life than any other of the learned professions. While the minister and the lawyer in turn have their arduous work and duties, yet the medical profession is the one you look to so that you may have a clear head and perfectly healthy body for your daily labors. It is he who holds the secrets of your life. Your physician, in order to carefully administer to your every want and need in time of sickness, should know your whole system and life from the cradle. It is to him you reveal your whole life and deeds so he may judge how properly to relieve your sufferings so you may attend to your daily duties; and in your last hours on earth, he is often found to be the best comforter and sympathizer with those whom you may leave to mourn. What profession is more noble!

Gentlemen, there is more at interest here than if this were an action for debt. These defendants are not in debt to this plaintiff. They do not owe her a cent, and although this suit is one to recover money damages, the effect of a judgment for any sum against these defendants is far-reaching and significant. It means that they have been careless, negligent, unskillful and untrustworthy in their professional conduct. This is the charge. Their professional reputation is attacked! This is a suit for malpractice, gentlemen; do not forget that! Now, what is malpractice? Let us see if the charge has been established, and if these defendants are malpractitioners. Malpractice is an improper discharge of professional duties, either through want of skill or negligence. In other words, it is negligence. That is a fair definition. Being an action for malpractice, it is one in tort, as we lawyers say. Now, the medical man holds himself out to the public, that he possesses the ordinary skill requisite for reasonable success, and that he will attend to the case put in his charge with due care. Hence, negligence in the medical man is a violation of the obligation that he impliedly enters into when he accepts charge of a patient, which obligation enjoins care and caution in what he does and what he omits to do.

He then explained that the burden of proof rested with the plaintiff, and commenting on the evidence and the results of the autopsy, which were "pulmonary edema, pachymeningitis, old adhesion of lung on left side, kidneys show some changes, gangrene of the first finger of the right hand," said:

You will remember that the plaintiff's case was hanging by a hair, and it was only because I saw the trial was about to terminate by the withdrawal of a juror, resulting in a mis-trial, that I consented, in order that these defendants should have an opportunity to be heard, to admit that if Dr. Walsh, who had made the autopsy, and who is at present on the high seas, was in court, he would testify that the autopsy disclosed just what I have stated to you.

* * * On behalf of the plaintiff, a Dr. —— was called on to give expert evidence. He said he resided at —— avenue, in this city. He said he graduated from the University at Vienna; that he came to this country in 1875, and graduated in 1884 from —— College, in Chicago. In answer to a question of the plaintiff's counsel, he testified that no conscientious physician would administer chloroform to a patient having incipient disease of the kidneys. This was the counsel's climax. The height of this case had then been reached. The witness submitted most unwillingly to cross-examination. You will remember how I asked him question after question as to what effect chloroform would have upon the human system. Many books of standard medical authority—books which he was compelled to admit were standard authorities, whether he had ever seen them or not—were read to him, paragraph after paragraph, wherein all the authors had written and asserted exactly the opposite to what he had testified to. The only way in which he could crawl from the ridiculous position which he had assumed, was to say, "I don't agree with the author." He put himself up as authority against them all. Yet he had to admit, although he had held the position of a Coroner of some obscure place out in the Western part of this country, that he has had deaths in his practice while he administered anesthetics. What could be his defense in case a suit for malpractice should be brought against him, when all the standard medical authorities would be read in evidence, as against the method he had adopted or the remedies he had used? I confess I do not know. I fear he would have to throw himself on the mercy of his accusers, and beg. Contrast him, as a witness, and his testimony, with all the standard medical authorities here produced; contrast him and his testimony with the high character and reputation, city, State, and national, of Drs. T. Gaillard Thomas, William T. Bull, Robert Abbe, J. West Roosevelt, Herman J. Boldt, Edwin B. Cragin, and Ferd C. Valentine, called to the witness-stand by the defendants—witnesses whose very words, thoughts, and advice are sought after by the learned of the medical profession. What did those eminent medical college instructors and hospital surgeons say? You, gentlemen, have heard how they have ridiculed him. Not one agreed with him—not one. Some simply said "No," when asked if they agreed with him; others said, "It is absurd." I challenge the plaintiff's counsel to produce another man of any medical knowledge who will testify that he agrees with him. He said no conscientious physician would give chloroform to a patient who had any kidney disease. The authorities read to you and the witnesses said, "Do not give ether." Would you, or any reputable physician, believe —— and give ether, when all the authorities tell you in plain words not to give ether, but affirmatively say, give chloroform? I will admit doctors do not always agree. It is not natural that they should. Some physicians will give chloroform in any case. Some will give ether in any case. The evidence has demonstrated that; but not a

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single expert witness testified that he should not give chloroform when the patient had any kidney disease. I think I can fairly dismiss —— as a witness in whose testimony you can place no degree of confidence or credit.

Now, gentlemen, what more did those eminent physicians and surgeons—men of national reputation—testify to? You will remember the long, hypothetical statement reciting all the facts proved in the case and the questions which followed it. All the witnesses—yes, all, not a difference between any one—testified that the defendants were not malpractitioners, that they followed the best practice, and used all the care that could be used. They followed the usual course skilled physicians and surgeons follow in such cases; that they were not negligent in their practice in any respect; that their treatment was proper in every respect; and they all approved of etherization by beginning with chloroform.

Now, gentlemen, we will turn our thoughts to the family deprived so suddenly of its head. Mr. M. L. had a gangrenous finger. The defendant, Dr. Goelet, was his family physician, and on March 20, 1892, attended to amputate the finger with Dr. Delphey, who was to administer the anesthetic. An examination of Mr. L., the patient, as you have heard testified, was made in the usual way and manner the day just prior to that set for the operation. Under the anesthetic agent, he died. The defendants deplored and greatly regretted the death. It was an accident, an unforseen and unexpected event, which no finite being had any reason to expect. The event is great to be regretted by all. But, gentlemen, this is not a case of charity. No one would be more liberal to aid and assist the afflicted family in case of need than their family physician. But when that trusted, competent, and skillful family physician, and his able assistant are attacked unjustly for malpractice, and proclaimed to the world to be malpractitioners, there was no other course left for them but to defend themselves, their honor, their integrity, their ability, their lifelong study, their professional reputation. That is what is at stake in this action.

There is an element in this case to which I must call your attention. You have doubtless observed, gentlemen, that the plaintiff's counsel, by all the pertinacity he could possibly bring to his aid, insisted that these defendants should not testify in this case in their own behalf. He based his objection to their testimony on the ground that the code relating to legal practice prevented physicians disclosing any information obtained in their professional capacity. You will remember when Dr. Goelet was called by me as a witness, the plaintiff's counsel at once stated his objection, and made a preliminary examination of the doctor, to ascertain whether the information which he obtained and was about to testify to was obtained in his professional capacity as a physician. The doctor answered that it was. Then the counsel's objection was formally stated to the court, to-wit: That the doctor was not a competent witness, as the information was sacred, and he should not be permitted to testify. What was that done for, gentlemen? The evidence on the one hand had been given. Evidence had been presented that the doctors, these defendants, did and said this and that, and yet the counsel asked His Honor, presiding over the trial of this most important case, to decide that the defendants could not testify, virtually clasping and fastening over the mouth of these defendants a solid mask to prevent them from giving their version of the unfortunate accident. Oh, no, gentlemen; he was unsuccessful! His objection was promptly and justly overruled, and the proposition decided adversely to him. Then each of these defendants told in turn all that each of them had said to the deceased; what the deceased had said to them; just what they did, and how the unfortunate death of Mr. L. happened. I will not recite it to you. You have heard all the evidence, and wherever there is any difference of question of fact presented by the evidence you are to decide it. What is more reasonable than the defendants' position that an unfortunate accident had happened, for which they, in law, are not responsible?

You have heard the witnesses testify that death will happen suddenly from chloroform, and also from ether, even with the utmost care on the part of the surgeon. There is no dispute of that fact. I have shown you by evidence that all care was used by these defendants. The anesthetic was administered in a manner approved by the best medical authorities. I have demonstrated that these physicians were justified in administering the anesthetic as they did. What now remains? Your verdict in their favor. That is now asked, and justly so. I am about to leave the case of the defendants with you. The curtain of this trial is being dropped, and when submitted to you by His Honor's charge, we will await your verdict. What will that verdict be? We feel confident it will be for the defendants. Think of it carefully, gentlemen. What will a verdict for the plaintiff mean? Let me tell you in a few words. As this is an action for damages in tort, it can be followed by an execution to be issued against the person of these defendants to incarcerate them behind prison bars. It will be remembered by every surgeon in this land, and no surgeon will dare give an anesthetic agent until an iron bound contract has been signed by the patient, holding the surgeon blameless for all consequences. Think of it, gentlemen; a verdict for the plaintiff! One of you, who may render such a verdict in this case, may be injured in a few days. You may be seriously injured; amputation may be necessary to save your life. You are in great pain, and suffering severely; and the injured member, be it a foot, a hand, or a finger, must be amputated to save your life. Your life's blood is slowly but surely dropping away. You exclaim: "Doctor, I can't stand it any longer! Hurry and give me something to relieve the pain, and amputate!" All is ready for the operation, but your physician suddenly remembers the case of L. against Drs. Goelet and Delphey, in which the jury decided against the defendants.

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Then your physician tells you, "Not yet; you must wait until I can see my lawyer, and have a contract prepared for you to sign, to protect me in case of an accident of any kind." In the meantime, you lie suffering, perhaps dying. Think, gentlemen, carefully, what results a verdict for the plaintiff in this action will bring.

And now, gentlemen, I am about through. In you we have all confidence that the ca·e is in good and careful hands. In leaving with you this case, I must call your attention to one word in the lexicon more bright than any star in the constellations. I think I can now see it standing out in your attentive and watchful eyes, and that word is that ever far reaching and effective word "Justice." Do justice in this case, and as the years roll on and your time comes to leave your dear ones behind you, may you never, never have any cause to regret the verdict given by you in this action. In all sincerity, in all hopefulness in the right, and that justice will prevail, I have confidence in asking you to return a verdict for the defendants.

Judge Truax's Charge.

This action is brought by the administratrix of M. L, deceased, to recover compensation for the death of her husband. She alleges that, on the 20th day of March, 1892, the defendants, contrary to the repeated objections and expostulations of M. L., administered chloroform in such quantities as to cause his death on that day, and that such death was due solely to the improper and unauthorized administration of chloroform carèlessly and negligently given, as aforesaid, and to the want of ordinary care and skill of the defendants, and of each of them.

The defendants deny these allegations; that is, they deny that they administered the chloroform contrary to the repeated objections of the deceased, M. L., and they deny that the chloroform was administered in such quantities as to cause death, or that it was administered in an improper and negligent or careless manner; so that you have, I might call them, two issues to determine:

1. Was the chloroform administered against the objection of M. L.?

2. Was it administered carelessly, negligently or un skillfully?

Now, upon these points, the plaintiff has the burden of proof; that is, she must establish from the evidence in the case that the chloroform was administered by the defendants against the objections of M. L., or that if it was so administered, it was administered carelessly and negligently and unskillfully, before she can recover in this action. If the evidence has left your minds in such a condition that you can not answer those questions either one way or the other, then the plintiff has not proved her case, and your verdict should be for the defendants.

You will observe that I have submitted the case to you in two aspects. The first is, did the defendants administer chloroform contrary to the objections of the deceased, M. L, and the second was in reference to the skill with which the chloroform was administered. You are to determine from the evidence whether or not M. L. objected to the administration of the chloroform. You have heard the testimony of the plaintiff upon that point. I charge you that an objection made by Mrs. L., or by the daughter, is not an objection that the defendants in this action were bound to give heed to, especially when you consider that Mr. L. himself was present. Their wishes do not bind the defendants in this action. I do not pretend to repeat to you the exact words that were used by Mr. L., but you may remember it was something like this: Mr. L. said: "Don't give me chloroform, Doctor," and then he said, subsequently, or about the same time: "Don't hurt the old man, Doctor."

The statement of the witnesses for the plaintiff is denied by the defendants; that is, the defendants say that Mr. L. did not give a positive command not to administer chloroform, and, therefore, I leave this question of fact to you, to be determined from the evidence in the case. But if you come to the conclusion that the deceased did, in fact, say, "Don't give me chloroform, Doctor," I leave it for you to determine whether that was meant as a command, or whether it was the expressiom of a wish on his part that he was not to receive chloroform, the same as the other expression, "Don't hurt the old man, Doctor," or "Don't hurt an old man." That question of fact, which you will discuss among yourselves when you reach the jury room, is to be determined by you from the evidence.

Now, if the doctors, against the wish of Mr. L., administered to him chloroform, they became trespassers on that moment, and they are responsible for the results of their trespass. I charge you that the evidence shows that Mr. L died, not because chloroform was administered or because ether was administered, but that he died because some kind of an anesthetic was administered to him; and you must find from the evidence in the case that he died because chloroform was administered to him, before you can hold the defendants in this action upon the trespass view of the case, that I have presented to you.

There is another view that I have suggested to you, and that is the one relating to the skill and care and knowledge of the defendants. The law requires that physicians and surgeons shall be skillful in their profession, and that they shall exercise reasonable and ordinary care and diligence, care and diligence proportionate to the importance of the case in hand. Physicians, however, do not insure success; they are only bound to have the ordinary amount of knowledge passessed by the average of the profession, and they are bound to use only that degree of care and skill that the nature of the case requires; that is, if it is an important case, if they are administering a deadly drug, they are bound to be more careful than they are when they administer a comparatively harmless drug.

Now, you are to determine whether the physicians

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have violated this rule that I have laid down to you; whether they have, in this case, failed to exercise care and skill. If they have, then they are liable for the consequences of their act. If they have not, they are not so liable.

You have listened attentively and patiently, I have noticed, for the last two or three days to the discussions of the physicians upon this point. You have heard references made to the condition Mr. L. was in at the time the operation was performed. The doctors have told you of the examination that they made, and they have told you what they found and what they did not find; and then you have heard the other physicians testify as to whether or not their conduct under the circumstances was or was not careful.

It is unnecessary for me to go over all this testimony, because I know that it is comparatively fresh in your minds, and that it will be freshened up when you talk among yourselves. If the physicians used due care, they are not liable, no matter what the result of their action was.

You can easily see that, if a physician at all times was to be held liable for the bad results of an operation performed by him, we would have no operations performed, or any physicians to perform them. They would not take the responsibility; but they do hold themselves out as possessing special knowledge in their profession, and do also hold themselves out as exercising care and skill. If they do exercise care and skill, as I have said to you a number of times, they can not be held liable. If they do not, they may be held liable. It is for you to say whether these physicians have violated the rule I have laid down to you.

The plaintiff sues to recover $5,000 as compensation for the death of her husband. She is entitled to recover such sum as will represent in your minds the pecuniary loss resulting to the next of kin of M. L. from his death, not to exceed $5,000. The statue allows you to fix the damage anywhere within the limit of $5,000, and you are to determine what sum, if you come to the conclusion to find for the plaintiff, will compensate the next of kin of M. L. for the pecuniary loss occasioned to them by his death. You have heard the testimony from his wife as to his earnings, and as to his general condition. You must remember, at this particular time, he was not the well M. L. of a few weeks before, but on the contrary, was suffering from a gangrenous affection of the finger.

I think that Dr. Thomas, in referring to that, said: "You wouldn't let the man go and die, would you?" Therefore, you must take into consideration the condition that he was in at the time that they gave him the anesthetic.

The jury rendered a verdict in favor of the defendants.—*American Medico-Surgical Bulletin.*

Evulsion of the Trigeminus for the Relief of Severe Neuralgia.—In the author's opinion (Dr. Karewski, Berlin, *Deut. Med. Woch.*) the cause of the failures and recurrences observed in the treatment of trigeminal neuralgias is to be sought in the inadequacy of the various measures employed. The neuralgia which disappears after the use of purgatives is certainly of an entirely different character, etiologically, than that which is relieved by the extraction of teeth, or that which demands the most radical and dangerous surgical procedures, such as opening into the cranial cavity and resection of the Gasserian ganglion. It is a well accepted fact, however, that the vast majority of neuralgias of the entire trigeminus or its branches take their origin at the periphery and that dental caries is the most common cause of the primary affection. A neuritis is developed in the dental nerves which ascends and finally involves the main trunk and then the ganglion. Owing to the anastomosis between the three trunks the process may be transferred from the one to the other, and before it has reached the ganglion the neuralgia may skip from the third to the second division of the fifth nerve or, *vice versa*, to the first division. It is quite often possible by the removal of peripheral causes to gain the mastery over the affection, and thus to demonstrate that terminal branches of the trigeminus are the carriers of the neuralgia. In this way only can the successful results following extraction of apparently healthy teeth and resection of the alveolar process be explained. More frequently, however, the inflammatory process has invaded extensive sections of the nerve, and it then becomes necessary to excise these in order to effect a permanent cure. The failures following resection of the nerves are due, in a large number of instances, to the fact that the excision of the nerves has not been undertaken sufficiently near the central end and that too small sections have been removed.

From this it appears that, after trial of the customary remedies in trigeminal neuralgia, we should not delay too long with operative measures, and that the affected nerve trunk or branches should be attacked as close to the center as feasible and a sufficient portion excised. The earlier the operation is undertaken, the more positive we can be that the neuritis has not extended to the ganglion, the more favorable will be the chances for a radical cure and the less dangerous the procedures required.

While intra cranial destruction of the trigeminus should be reserved for extreme cases of this affection, it is not always necessary in extra-cranial operations upon the nerve to resort to resection at the foramen rotundum or ovale, which are attended with deformity and disturbance of function.

Evulsion of the branches of the trigeminus, as described by Thiersch in 1889, is eminently adapted for eradication of the entire extra-cranial portion. This procedure consists essentially in exposing the nerve in its peripheral areas of distribution, followed by evulsion with a specially constructed forceps. In this way the peripheral branches of the nerve, as well as a small portion of its proximal end, can be removed. Thiersch

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who employed this method in a large number of cases, concluded that it was capable of replacing all operations designed to lay bare the nerves at the base of the skull. He was, however, well aware of its limitations. While it is possible in all cases to extract the peripheral branches, those lying beyond the forceps are stretched, but not torn out. Only those branches which are grasped by the forceps are removed, while those given off above and below the point of laceration remain. Thiersch, therefore, pointed out:

1. That the first division of the trigeminus should be laid bare as deeply in the orbit as possible, so that its ramifications can be found and removed.

2. That after extraction of the infra orbital branch of the second division the anterior and median dental nerves must be eradicated by a hook introduced into the infra orbital foramen.

3. That the auriculo-temporal branch of the third division which is frequently the seat of neuralgia is not drawn out with the forceps, but must be separately dissected out between tragus and condyle of inferior max illa and extracted.

The field of usefulness of Thiersch's procedure can be greatly extended by a few slight modifications. While the first division can be completely eradicated with all its branches, Witzel has shown by experiments on the cadaver that it is possible to draw out the entire superior maxillary nerve up to the foramen rotundum with all its ramifications through the infra-orbital canal. J. Israel has succeeded in extracting also the superior dental nerve by laying open the infra-maxillary canal with the chisel.

On the ground of this experience, Karewski has succeeded in five cases in extracting the entire second division of the trigeminus—at least that portion concerned in the production of the neuralgia—by laying bare the infra orbital nerve as far centrally as possible. It is comparatively easy and free from risk, after finding the nerve at the infra-orbital foramen, to remove with a fine chisel the upper wall of the infra orbital canal to a sufficient extent to expose the infra orbital fissure. The nerve is then carefully lifted out, grasped as far centrally as possible, and, after the orbital fat and eyeball have been drawn upwards out of the way by means of a spoon-shaped speculum, it is pulled out. By proceeding in this manner it is possible to remove the trunk, not only with the superior nerve, but also beyond its anastomosis with the nasal ganglion.

It is much more difficult to expose the trunk of the third division of trigeminus from its peripheral point of ramification. The author has been successful in doing this in four years. The nerve was exposed by an incision commencing in front of the mastoid process and extending downward and forward in a slight curve to the angle of the jaw. After carefully dissecting out the lowermost terminations of the facial nerve, the parotid gland is laid bare, separated by blunt means, and together with the branches of the facial and the lobule of the ear drawn downward. The internal pterygoid muscle is now separated from the internal surface of the inferior maxilla (the patient's head being allowed to hang downward), and with the lingula, which can be felt by the finger, as a guide, the inferior dental nerve is sought for. When found it is drawn out with a tenaculum which is entrusted to an assistant, while the operator seeks for the lingual nerve. This is found just beneath the mucous membrane at the situation of the molar teeth. The submaxillar gland serves as a guide; the nerve, which is thinner than the inferior dental, and its ganglion lie in the loose connective tissue above the gland. After the two main branches of the inferior maxillary have been found, they are traced upward to the main trunk; only blunt means are employed in the dissection, the external pterygoid muscle being drawn aside by a long, thin, angular tenaculum. In the same manner the internal maxillary artery can be protected against accidental injury, or if preferred, it can be ligated. In order to afford him a better view of the narrow and dark field of operation Karewski makes use of an electric lamp attached to his forehead, which he recommends highly. The further we are able to penetrate the more positive will be the success. It is sometimes possible to advance as far as the foramen ovale; at any rate, the common trunk can be successfully extracted if both branches are picked up with the tenaculum, then grasped with the forceps as high up as possible and carefully twisted out. All the soft parts must be retracted with elevators and blunt hooks, so as to prevent the forceps from catching up portions of muscle or fascia.

Under favorable conditions (thin old persons) it is possible to tear out the entire trigeminus with all its branches with but little risk. In the case of a woman aged 67, the author successfully performed evulsion of the three branches of the trigeminus in two sittings, with the result of complete relief of the pains for the past nine months.

Although it is not always possible to remove all the branches of the nerve, a cure results if a sufficiently long section of the central portion of the trunk be removed. Aside from the above case Karewski removed the second branch of the trigeminus in five cases; in two in connection with the first branch, in two together with the third, and in one together with the first and third. A complete cure was effected in four cases, while in the fifth the neuralgia was due to a cerebral lesion and the operation was undertaken as a last resort at the urgent solicitation of the patient and his physician.

Facial paresis was observed in one case after extraction of the second branch of the trigeminus and once after removal of the third; in both it was of only short duration. The paralysis was evidently due to injury of the nerve during operation, which can be avoided, if in the cutaneous incision the small branches of the facial running to the jaw and neck are separated by blunt means and drawn aside.—*The International Journal of Surgery.*

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Experimental Typhoid Fever.—Dr. Sanarelli publishes a third memoir on this subject in which he urges strongly that his researches tend to prove that human typhoid fever is not a primarily intestinal affection (*Brit. Med. Jour.*). He insists first on the tolerance of the intestinal mucous membrane which may exceptionally be exhibited, especially in the case of relapses, where only the patches which escaped in the first attack suffer. This intestinal tolerance may be obtained experimentally without in any way altering the vulnerability of the organism generally to the virus. A quantity of sterilized culture of Eberth's bacillus, sufficient to vaccinate the animals, was injected by degrees into the stomachs of guinea-pigs, the necessary quantity being determined by simultaneous subcutaneous injection in other animals till these were fully vaccinated. The animals so treated were then inoculated with virus together with others to serve as controls. They died in the same time as these, but exhibited no abdominal symptoms, the meteorism, tenderness and pain present in the latter being absent. Post mortem, while in the control animals abundant peritoneal exudation was found with typical intestinal lesions, in the others there were no fluid, and the intestines were perfectly normal, with their mucous membrane intact. But, at the same time, the other mucous membranes were found congested, which goes to show, according to the author, that the immunity of the intestine results from the habituation of the cells which have eliminated the first poison. A similar immunity was obtained by the injection of putrid beef broth. As in vaccination by subcutaneous injection, the microbes, together with B. coli, tend to disappear from the intestines thus immunized; but on inoculation B. coli again becomes numerous and virulent, as in ordinary cases, although the intestinal walls have perfect immunity. Investigating the nature of immunity against typhoid, the author criticizes and rejects the experiments tending to prove that the serum of immune individuals possesses bactericidal or antitoxic properties. First, as to bactericidal power: Animals vaccinated in the ordinary way were inoculated with virus. The first was killed after two days, and cultures made from the peritoneum were fatal to guinea pigs in twelve to sixteen hours; cultures from the second, killed after three days, were fatal in ten to twelve hours; cultures from the third, killed after four days, were fatal in eight hours, the usual intestinal lesions following with marked intensity. Therefore, in animals vaccinated against typhoid fever, so far from their serum being bactericidal, Eberth's bacillus flourishes and progressively augments in virulence. Secondly, as to antitoxic properties: Vaccinated animals were found to be even more vulnerable to the toxin than unvaccinated, the hyperthermia being more marked and regularly progressive. Further, guinea pigs and mice were inoculated with toxin mixed with serum of vaccinated animals. With the exception of two mice (notoriously uncertain in reaction), they all died in the ordinary way. On the other hand, the activity of the phagocytes of vaccinated animals is found to be enormously increased. As stated, no peritoneal effusion is found, but the intestines are covered with a thin, sticky layer, which the microscope shows to consist exclusively of leucocytes and endocellular microbes. The author concludes that B. coli and Eberth's bacillus must be considered as distinct varieties. Finally, the author claims that the biological process of human typhoid is to be explained by the knowledge gained by experiment. The earliest symptoms are malaise, fatigue, pains in the head and limbs; the intestinal symptoms only appear when absorption begins. The hyperthermia is a measure of the reaction of the organism to the poison, and if the bacillus of Eberth could fabricate its poison with the same intensity as the cholera vibrio in the human organism, the disease would be rapid and apyretic as in the animals experimented upon.—*N. Y. Medical Record.*

NOTES AND ITEMS

Sudden Death in Consequence of a Urethral Injection of Cocaine.—In the *Centralblatt f. Chirurgie* for March 10 we find an abstract of an account published in *La France Medical* by M. Reclus, of a case in which sudden death followed an injection of about six drachms of a five per cent solution of cocaine into the urethra. The urethral mucous membrane appeared to be quite intact, and the death was attributed to pronounced arterio sclerosis and to the undue quantity of the drug employed.—*N. Y. Med. Jour.*

A New Cure for Hay Fever.—Fuber, of Hamburg, who suffered a great deal from hay fever during last summer, noticed that in winter a coryza was accompanied with hot ears, which regained their normal temperature when the discharge from the nose was established. He tried a reverse order of things on the hay fever, and rubbed his ears until they became red and hot. It is now the third summer he has led an endurable existence. As soon as there is the least amount of fullness in the nose, the ears are noticeably pale. A thorough rubbing of the ears has always succeeded in freeing the nasal mucous membrane from congestion. The rubbing must be thorough and repeated.—*Med. Rep, Calcutta.*

A Pocket Explosion.—On the morning of Saturday, January 19, Dr. Davidson was called to see a patient and found him suffering from an extensive burn of the inner surface of the left thigh, with another burn of smaller extent, but more severe, extending over the thenar half of the left palm. The history of the injury elicited was that the patient had been suffering from sore throat and had purchased some chlorate of potash lozenges. These he was carrying in his trousers pocket rolled up in a piece of paper. One of the lozenge

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loose in the pocket, which also contained a box of safety matches. While moving about he suddenly heard a noise like the kissing of a squib before the detonation, and saw smoke issuing from his pocket, which he grasped from the outside thinking to smother the fire. An explosion followed which blew out the whole of the front of the trousers leg. There was no loud noise, only an exaggeration of the hissing noise heard at first, but there was a considerable volume of flame. What had evidently happened was that the loose lozenge, by rubbing on the composition on the outside of the box of safety matches, had become ignited, and that the rest of the lozenges had been exploded by it, causing the chief explosion. On the room being searched the remains of several of the lozenges were found. They had been reduced to about a third of their normal size and the outside of them appeared scorched. The patient had fully one ounce of the lozenges in his pocket at the time of the occurrence. On January 25 the wounds were healing rapidly and were almost entirely covered with new epidermis.—*Lancet.*

Heart Disease.—Pawinski (*Therapeutische Monatscheft*) compares caffein natrio-salicylate with strophanthus and digitalis as follows:

In valvular diseases or the heart, with disturbance of compensation, digitalis and strophanthus are superior to caffein, but the latter can often do good service when the former are contraindicated.

In respect to regulating the heart rhythm, caffein is also inferior to the others; but in respect to excitation of diuresis, it is much superior. The best field for the administration of caffein is in diseases of the heart muscle, either functional or degenerative, and especially in the early stages of the disease. But in the later stages, when the heart, in consequence of progressive degeneration of the muscle fibers, is not able to perform its duty, and there are edema, dyspnea, and dilatation, then we must resort to digitalis.

Caffein is also indicated in acute insufficiency in patients whose circulatory system is otherwise healthy, such as after severe mental strain, moral commotion, and especially during fevers. In many cases also caffein produces a pleasant narcotic effect.—*Med. Surg. Rep.*

A Syphilitic Lesion Observed in a Pre-Columbian Skull.—Dr. Albert S. Ashmead writes to us as follows:

In the Bandelier collection, Metropolitan Museum, New York, there is a skull of a mummy, just being classified, from Pacha Camac, on the Peruvian coast, near Lima. It was found twelve feet underground, and no other part of the skeleton was in a condition to be shipped. It is without doubt, according to Mr. Saville, the director, and Professor Putnam, who examined the specimen with me, pre-Columbian. In this burial place nothing modern, nothing post-Columbian has ever been found.

In the right supratemporal region of the skull, on the parietofrontal suture, there is a mark of disease, almost eating through the bone; there is no doubt that the scalp had been removed, and what followed we may guess—it was found that the skull itself was affected, and the case was left alone. Evidently the man lived long enough to almost allow time to obliterate the mark of the surgeons's instrument. On the inside of the skull no mark of disease, except the extreme thinness of the tissue, strikes the observer. To my mind, this is an instance of syphilis in a pre Columbian skull. The location of this lesion and the appearance of the diseased bone throughout are peculiarly syphilitic. I have seen such instances many times in Japan, on the living body, and once in a post-mortem examination in a *yoshiwara* (licensed prostitute).—*N. Y. Med. Jour.*

The Influence of Climate on Health and Disease.—Mr. Harrington, chief of the Weather Bureau of the United States Department of Agriculture, has issued the following circular: "The interest manifested by every class of people in the subject of climate and its influence on health and disease, has determined the Honorable the Secretary of Agriculture, through the medium of the Weather Bureau, to undertake the systematic investigation of the subject. It is hoped to make the proposed investigation of interest and value to all, but especially to the medical and sanitary professions, and to the large number of persons who seek, by visitation of health-resorts and change of climate, either to restore health or prolong lives incurably affected or to ward off threatened disease. The study of the climate of the country in connection with the indigenous diseases should be of material service to every community, in showing to what degree local climatic peculiarities may favor or combat the development of the different diseases, and by suggesting, in many instances, supplementary sanitary precautions; also by indicating to what parts of the country invalids and health seekers may be sent to find climatic surroundings best adapted to the alleviation or cure of their particular cases. The hearty co-operation of the various boards of health, public sanitary authorities, sanitary associations and societies, and of physicians who may feel an interest in the work, is asked to achieve and perfect the aims of this investigation. No compensation can be offered for this co operation other then to send, free of cost, the publications of the Bureau bearing upon climatology and its relation to health and disease to all those who assist in the work. Co-operation will consist in sending to this office reports of vital statistics from the various localities. That these reports may be of value, it is evident to all that they should be accurate and complete, and be rendered promptly and regularly. Blank forms of reports have been prepared so as to occasion as little trouble and labor as possible on the part of the reporter, and will be furnished by the Bureau on application. At the very beginning of the investigation it is not possible to outline precisely the channels through which the results obtained will be made pub-

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lic, but it is hoped to publish soon a periodical devoted to climatology and its relations to health and disease. The publication will probably resemble in size and general appearance the present *Monthly Weather Review*, the subject matter being, of course, different. More detailed information will be furnished on application."

Prophylaxis of Consumption.—"A few points on the avoidance of the greatest danger to human life," should be the full heading. Consumption destroys more lives than any other cause.

The first point is that the matter which those sick with lung troubles cough up must be temporarily and permenently disposed of in such ways as to avoid all danger from it.

The infectious matter of the expectoration must not be allowed to dry, for it will then fly into the air and be inhaled.

The cuspidor, or other vessel, which receives the sputa, should contain a little water, or preferably a five per cent solution of carbolic acid (Solution E.) or of Lysol.

Flies should not be allowed to be the carriers of infection; therefore cuspidors and spit cups should have covers in warm weather.

Each cuspidor should be filled with boiling water, when it is to be cleansed, its cover should be re-applied, and it should then be allowed to stand until it is cooled. One reason for prescribing that only a small quantity of water shall be put into the cleansed vessels, is that the boiling water may act as a disinfectant.

Each sick person must, therefore, have two cuspidors—one in use and one undergoing disinfection and the process of cleansing.

The rooms in which consumptive persons dwell or sleep should be furnished in such ways as to minimize the danger of their retaining infection and to permit their cleansing easily and safely. Carpets should not be in use, wooden floors with a few rugs are best; straw matting is permissible. The idea is the avoidance of raising a dust in sweeping. The floor or floor covering should invariably be cleaned by wiping with a damp cloth, never by sweeping with a dry broom.

The one main point in all this is to keep the infectious dust out of the air of dwellings, that it may not be inhaled.—*Med. Surg. Rep.*

A Lady and the Dog.—A female anti vivisector recently objected to the use of a dog (from the Philadelphia pound) in carrying out a surgical procedure proposed by Dr. W. W. Keen and wrote the Doctor a letter to that effect. Dr. Keen sent the following answer, published by the *Medical Record* of April 20, 1895:

"Aside from myself there are three parties who are to be considered in this matter. First, the dog; second, the man, and third, mankind. First; the dog; I stated to you that the dog would not suffer; that he would be treated with the same care as the man, and that after the operation I should continue the anesthetic until the dog was dead. Yet you refuse me the dog because, forsooth, somebody else may be cruel to some other dog. Secondly, the man. This man knows what I am going to do, and is anxious to have it done. His leg is paralyzed. If by an ordinary surgical procedure I can re-establish the continuity of the nerve, I may be able to cure his paralysis. In that case I should not have recourse to the dog. If, on the contrary, the gap between the two ends of the nerve is so great that I can not bring them together, either the man must be condemned to paralysis for life or some other means must be tried to re-establish the nerve and so restore to him a useful leg. This might be done by the process of nerve-grafting. Yet you refuse me a dog on the ground that it is an 'experiment.' Granting that it is, it is at the most a perfectly harmless experiment, for it would not be more painful than any ordinary operation; and even if it absolutely fails, it leaves the patient not a whit the worse off. If it succeeds, it will be the greatest possible service to him. Thirdly, mankind. The only way in which surgery can make any progress is by testing new methods of treatment which have at least a reasonable possibility of success. Just such persistence and continued trials have encircled the globe with ocean cables. But you assume the role of a judge, who decides that such a new method of treatment shall not be tested. You, who I presume would admit that you know nothing of surgery, put your judgment against that of one who has spent thirty-five years in the earnest study, active practice and continuous teaching of surgery. You will excuse me if I think you are not a competent judge. If you had your way there would be no Pasteur Institutes in any part of the world to save so many lives from hydrophobia; there would be no antitoxin treatment of diphtheria, which already has borne such wonderful results; there would be no inoculation against cholera, which in the hands of Haffkine bids fair to rescue thousands of lives; there would be no cerebral surgery, since you would not allow us to investigate the functions of the brain; there would be little or no antiseptic surgery, the greatest stride forward of this century. In your misguided zeal for dogs you are guilty, in my opinion, of cruelty to this man, and cruelty to all mankind, because you thwart scientific progress under the guise of love for animals. You would condemn to the torture and disabilities of accident and disease, people who have happily been rescued by the more humane scientists in my profession. You will pardon me if I write earnestly. It is because I feel deeply the injury you are trying to inflict upon the human race. Happily, the common sense of the community does not allow you to have your way, as they prefer the devotion of my own profession to the welfare of mankind, to your devotion to dogs in preference to men."

Hygiene in the Public Schools.—There are many points of view from which this very important

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subject may be profitably considered, and there are many from which it has been ably and often discussed.

That aspect of "hygiene in the public schools" which has been most frequently held up to view and almost as frequently animadverted upon, is perhaps the one all too commonly furnished through incompetency of architects and ignorance of school boards throughout America—namely, the mal-hygiene surrounding the pupils while attending the district schools.

Much as has been exacted from the tax-payers and expended during decades for the erection and maintenance of public schools in America, it is fair to say even now that four-fifths, possibly nine-tenths of American pupils are at school under numerous evil surroundings, any one of which could be held up as a striking object lesson in mal hygiene. As to heat, light, ventilation, posture, type and color of text books, exercise, etc., with some comparatively rare exceptions, they may be generally characterized as positively bad. And the worst feature of this whole matter is the apparent callous indifference with which the general public regards the continued subjection of hundreds of thousands of young Americans to such degenerating surroundings at a time when their rapidly developing tissues are tender and plastic—readily impressionable by all influences, whether they tend to healthfulness and the development of a strong, rugged physique, such as will best fit them for a successful battle of life in every sphere, or whether they tend to undermine the youthful vital forces and generate physical habits which are bound in the long run to warp and hamper in very many ways the progress of strong physical development and endurance of our race, not to mention the broad foundations laid for actual disease.

It was forcibly pointed out in one of the papers read at the meeting of the American Health Association convened in Canada, that radical improvement in public hygiene should begin in the public schools, and, unless it is done, we may rationally expect to see a progressive physical degeneration of our race through the pernicious influences of the miserable hygienic surroundings to which our school children are so commonly subjected in the common schools.

It has been frequently said, and we think no reasoning friend of public education in this country will be disposed to contest its truth, that the training received in the public schools is by far the most potent factor of the welfare of the State, present and future. It is almost a platitude to repeat it here, but we wish to emphasize the fact, for it is so constantly ignored, that the physical vigor of the body is essential to the sustained vigorous activity of the mind. The interrelations of the corporal and intellectual constitutions are intimate and are generally admitted, yet little practical recognition of these fundamental facts is reflected in the construction and management of our public schools.

We do not enter at all into the much vexed question of the best methods of mental training of pupils in the public schools. Our sole aim at this time is to once more point out the egregious folly of neglect of the plainest principles of hygiene in the construction and conduct of these schools, and the inevitable damage to the development of our race and to the progress of American civilization through the continuation of that folly.

We have already alluded to the powerful influence upon the welfare of the State, of the training received in the public schools. Were instruction in the principles of personal and public hygiene made a common part of that training, the result could not but be an immense impetus to the welfare of the pupils themselves and of the general public. There is no mystery involved in these fundamental principles of hygiene. They are capable of embodiment in a primer. They are not above the understanding of the pupils even in the primary schools, and they can be presented to the minds of the young in a manner that is at the same time interesting and instructive. The influence of such teaching would certainly be manifold and far-reaching. We can stop to indicate only one of the many channels through which such invaluable information would flow for the public good. It would reach, for example, the homes of the poor and squalid; it would permeate the households of the millions of European emigrants who live among us under such conditions as must otherwise continue them as hotbeds of disease; it would mitigate to a vast extent the constant menace these classes are to the public health in America.

Then let us strenuously work for the introduction into the regular course of instruction in all public schools in America of at least the fundamental principles and practices of hygiene.—E. O. Shakespeare in *Dietetic and Hygienic Gazette.*

Mumps.

℞ Extr. belladonnæ, - - - - - - ℈j.
Ungt. hydrarg. cincr., - - - - - - ℥j.
Lanolin,
Vaseline, - - - - - - - aa ℥ss.
M. ungt.
Sig. Apply externally.

℞ Magnes. sulfuric., - - - - - - ℥ss.
Aq. menth. pip., - - - - - - ℥iij.
Spirit. nitric. eth., - - - - - - fl℥ij.
Syr. rhei. aromatic., - - - - - fl℥j.
M.
Sig. Tablespoonful every three hours until bowels move.

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ORIGINAL ARTICLES

Spermatorrhea and Nocturnal Pollutions.

BY HENRY JACOBSON, M.D., ST. LOUIS, MO.

Read before the St. Louis Medical Society, April 13, 1895.

MR. PRESIDENT AND GENTLEMEN—We wish to clearly define and separate, as much as possible, the two sexuo-motor neuroses, Spermatorrhea and Nocturnal Pollutions, before relating the cases.

Spermatorrhea is a paresis of the ejaculatory ducts, often following gonorrhea, chronic prostatitis and vesiculitis (seminal); while nocturnal pollution is a motor neurosis, manifested by irritability and spasmodic action of the ejaculatory muscles of the bulbo cavernous region of the urethra and of the seminal vesicles, in which there is a discharge of semen, taking place during sleep, usually with voluptuous dreams and erect penis. This neurosis often follows excessive masturbation and, in severe cases, causes sexual neurasthenia. When we meet with the mixed cases, combining spermatorrhea and nocturnal pollutions, then, indeed, we have a trying ordeal before any improvement takes place. It is not well to cling too long to one method of treatment when the case proves stubborn. The remedy must be changed until good effects are arrived at.

According to Krafft-Ebing, the development of the sexual life has its beginning in the organic sensations which arise from the developing reproductive glands. These excite the attention of the growing youth, and, I believe, masturbation is soon begun as a result of visiting sensuous exhibitions, associating with older boys who masturbate and direct their attention to erotic literature. So there is established a direct connection between the brain cortex—which is the seat of sensation and ideas—and the genitals.

The secretion of semen, which takes place at puberty, gives rise to sexual ideas, images and impulses. The cerebral centers, by means of apperceived or reproduced sensual ideas, react on the reproductive organs, inducing hyperemia, secretion of semen, erection and ejaculation. This results by means of the lumbar reflex centers of vasomotor innervation and ejaculation.

The erection center, according to the experiments of Goltz Eckhard, is an intermediate station between the brain and the genitals. The nervous paths which connect it with the brain probably run through the pedunculi cerebri and the pons. The center may be excited by injuries causing inflammation of the spinal cord in the sacro-lumbar region, by syphilis of the spinal cord and sclerosis of the posterior column, which, many claim, is very frequently a manifestation of or dependent upon syphilis, cerebral disease, myelitis and infectious diseases in which the blood supplying the nerves is poor in nutritive qualities; as in influenza, small-pox, typhoid fever and phthisis pulmonalis. The pathological changes taking place in diabetis also occasionally cause spermatorrhea and nocturnal pollutions.

I believe among the predisposing and exciting causes the most frequent are sexual excesses and masturbation; especially if the system is under a strain from hard work, or there is a drain on the nerves from any other cause. As there is an intimate connection between the rectum and the genitalia through this nerve and blood supply, so any disease of the rectum or anus may, by the irritation set up, be a reflex cause of these motor neuroses; as, for example, hemorrhoids, polypi, worms, ulcers, pruritis ani or proctitis. Local irritants of the penis, acquired stricture (in this pathological state the urethra is hyperemic behind the stricture) and the ammoniacal changes taking place in the retained urine, act as irritants and may produce inflammation of the prostate and ejaculatory ducts. Other local causes are congenital strictures, urethral growths, phimosis, balanitis, herpes, posterior urethritis, prostatitis and inflammation of the seminal vesicles. Stone in the bladder, by causing masturbation, is also a cause.

CASE I.—Frank S., age twenty-six years, single, clerk.

Family history: No evidence of tuberculosis or neuroses.

Personal history: Masturbated several times daily for about a month when at the age of fourteen years. At the end of that time he ceased masturbating and never resumed the habit. The following year the first nocturnal pollution occurred, since which time he had from six to eight emissions each week until he consulted me. He also stated that frequently when holding conversation with any woman to whom he was attracted he would afterwards notice a bluish discharge from the

penis. The same appeared when he strained at stool or lifted heavy boxes. This discharge became more marked after an attack of urethritis which he contracted two years ago. It must have extended to the posterior urethra, judging from the history and symptoms he gave at the time when he consulted me. An unique symptom was an almost persistent itching above the pubes. He also repeatedly noticed long stringy flakes in his morning urine after the attack of urethritis. He complained of a dull languid feeling the day following the pollutions, and he became very irritable. Work became distasteful to him and was accomplished with an effort.

He stated, further, that the nocturnal pollutions at first were accompanied with erect penis and voluptuous dreams, but during the last year he often awoke and felt the discharge without accompanying dreams or erection. These emissions rarely occurred during the day.

Physical examination of the heart, lungs and abdominal viscera revealed nothing abnormal. Genitals were normal in size, firmness and temperature. There was no disease of the spermatic veins, nor could I find any of the diseases present which were mentioned before as local causes of these motor neuroses, except an important condition, posterior urethritis, which was demonstrated by the two-glass-urine test, after washing out the anterior urethra.

The microscopical examination of the discharge revealed lively, healthy-looking spermatozoa in abundance, triple phosphate crystals, round yellow bodies and tadpole-like epithelium.

Examination of the seminal vesicles per rectum revealed a full condition of one, but the discharge would not appear at the meatus by stripping them according to Fuller's method. The rectum and anus were normal.

The cremasteric reflex seemed to be exaggerated.

Patient is robust, of florid complexion, has a very good appetite and no tendency to constipation. He was not excessive in sexual congress, and he claims that he does not enjoy it as much as before the attack of gonorrhea.

Treatment—hygienic: I advised cold sponge baths every morning; also cold douches to the genitals, in which water sea salt had been dissolved.

Internally he was given fifteen drops of tincture of chloride of zinc, combined with fifteen grains of bromide of potash at 5 and 10 P.M.

Locally I used the cold sound every other night. This cold sound is a double metal catheter with a closed end, so that the cold water from a vessel about four feet above the table flows into one opening and passes through the sound and out of the other opening. To the latter opening is attached a piece of rubber tubing which can be placed in a pan or bottle.

The improvement was very slow; so he was given one-twentieth of a grain of cornutine internally three times a day. Once a week I used the galvanic current with the negative electrode in the prostatic urethra and the positive pole against the perineum, using a very weak, barely perceptible current.

Under this plan of treatment the improvement steadily continued until the average nocturnal emissions is once in two weeks. He no longer notices those large flakes in his urine, but careful examination of it occasionally reveals the short, tack-like threads in the last glass, indicating a persistence of the posterior urethritis. For that trouble he is receiving instillations of nitrate of silver solution and of the new astringent and antiseptic, alumnol, with good effect.

CASE II.—Albert B., age twenty-five years, single, robust, healthy looking, a recent graduate of Yale, consulted me a year ago next June for too frequent nocturnal emissions.

Personal history: He states he was the best runner in his class, his biceps felt like iron when they were contracted, and a physical examination of his viscera and genitalia corroborated his general robust appearance. None of the constitutional, predisposing or local causes could be found in his case, except that he was usually constipated, in spite of his abundant exercise, and that he had practiced onanism at the age of fifteen years for several months and then had overcome the habit. He never had gonorrhea or inflammation of the prostate.

Family history revealed no hereditary influences.

Upon examination of some of the discharge he brought me the coffin-lid shaped crystals, split sago like bodies, round cells and prostatic epithelium were to be seen under the field of the microscope, but I could not find any spermatozoa. A second examination gave the same result.

Treatment: He was cautioned to drink as little as possible at his evening meal, and to empty his bladder before retiring. Also, to sleep on his sides, so that the abdominal viscera would not impede the return flow of blood from the sexual organs—which frequently occurs if the patient sleeps on his back—and to take rectal injections of cold water at bed time. Morning and evening cold plunge bath, and sea-salt water douches to the genitals. I also used the galvanic current locally three times a week.

Internally he was given tincture of chloride of zinc, bromide of potash and ergotine.

This case improved rapidly, and at the end of six weeks' treatment I ascertained that he had had only two emissions, whereas, before treatment, they averaged three a week. These were enough to cause him much worry and to interfere with his studies.

He stayed in St. Louis two weeks longer and then left for his home in the South. He promised to write me if there was a recurrence of the frequent nocturnal pollutions. As yet I have received no communication. Of course, in this case there is no positive proof that the frequency of the discharge has not re-appeared.

CASE III.—Alfred P., age twenty years, very thin, pale, weak and bashful. He consulted me at the Clinic of the College of Physicians and Surgeons, for frequent nocturnal emissions, occurring every night for some

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three or four weeks, and again three or four times a week.

Family history good, with the exception that an uncle on his father's side died from consumption.

Personal history: He stated that he had masturbated only six or seven times during his fifteenth year, and had then stopped, never to resume the habit. The sexuo-motor neurosis dated from his eighteenth year, shortly after an attack of pneumonia from which he never entirely recovered. He has a very annoying persistent cough.

Physical examination of his lungs revealed a cavity in the left lung. Heart and other viscera normal. Varicocele of the left testicle; both testicles small and flaccid. The cremasteric reflex is almost entirely absent. No other disease that could be a factor in this sexual neurasthenia is or has been present. I believe that the continual drain on the nervous system caused by the pulmonary tuberculosis was sufficient cause for his condition. His power of erection was greatly diminished and annoyed him exceedingly.

Upon examining the urine I could not find any tubercle bacilli or other abnormal constituents. Examination of the fluid discharged during an emission demonstrated its seminal nature, but only one poorly shaped spermatozoon could be found.

Treatment: For the pulmonary disease he was referred to Dr. Jennings, who was in charge of the medical clinic.

I gave him a pill containing iron, quinine and nux-vomica; also cold salt water douches to the genitals night and morning. Before retiring he took fifteen grains of bromide of potash. No improvement took place in the strength of his erections, but the emissions have become lessened in frequency, so that he has only one in an average of twenty days. He is no longer able to visit the clinic, being confined to his bed by the consumption.

Case IV.—S. J, age twenty one years, single, medical student, is well developed and nourished.

Family history is excellent.

Personal history: At the age of twelve years he commenced to masturbate and continued to practice the same twice a week for one year. He overcame the harmful practice the following year and never resumed it. Since this time he has been troubled with nocturnal emissions averaging three a week. A tired, languid, drowsy feeling was the result of this drain in his general strength. He also noticed an inability to apply himself to his studies. Never had intercourse.

Physical examination of the thorax and abdomen, rectum, anus and genitals revealed nothing abnormal, with the exception that on passing a large steel sound I found the prostatic urethra anesthetic instead of the usual hyperesthesia in these cases. No previous constitutional disturbances could be found to cause, or predispose him to, this sexuo-motor neurosis. The testes responded well to the cremasteric irritation.

He brought me a specimen of the discharge, and eight hours after the emission I found it full of healthy, lively spermatozoa and some crystals.

The patient was taking the bromides before he consulted me, but stated that he felt so sleepy during the day, while under their effects, that he could not pay the proper attention to the lectures; so I placed him on ergotine in three grain doses, combined with citrate of cornutine one-twentieth of a grain, three times daily.

I also used the cold water sound every other night for a month, then twice a week for three weeks. At first he could not feel the cold water circulating in the sound in the prostatic urethra, but after the third treatment it became sensitive to the cold and continued so until the treatment ceased. He now has, on an average, one discharge a month, which is normal. He continues using a cold sound himself, which I advised him to do, and to stop in case catarrhal symptoms appeared.

Mr. R. Harrison, of London, England, reports, in his latest book, a case of obstinate spermatorrhea, in a patient who cured himself by producing a stricture in the membraneous urethra, by burning it with lunar caustic. Mr. Harrison afterwards performed urethrotomy for the stricture, but the spermatorrhea did not recur.

If you do not possess the cold water sound an ordinary steel sound may be used every other night for from five minutes to half an hour at each treatment. Occasionally catarrhal symptoms arise, and then the treatment should be stopped until they subside under the proper treatment for this condition.

Relapses may be expected in obstinate cases, and the patient should be forewarned so that he does not become discouraged and cease treatment.

Conclusions.

1. Seek other causes than Onanism, which, like malaria, is easier to find than the more concealed local diseases of the genitals and rectum. Again, systematic questioning will often reveal a *neuropathic* family or personal history, or, possibly, some of the predisposing constitutional diseases.

2. Not all cases improve under the same treatment. Remove the cause if possible. It can be prevented in some cases by warning the growing youth of the evil after-effects of *excessive* masturbation.

3. Bring the microscope, as well as the history of the case, to your aid in ascertaining if the case is nocturnal pollution, spermatorrhea or a combination of both.

4. Cauterization of the prostatic urethra, either by the negative electrode of the galvanic current or by solution of nitrate of silver, in my experience, has more effect in nocturnal pollution than in spermatorrhea, unless it proves to be a mixed case. Epididymitis, as a result of cauterization, does not occur as frequently as is claimed by some. I never had this complication in any of my cases. Nevertheless, it is best to warn your patients that it may occur.

5. Weak and anemic patients need fresh air, tonics, and the best hygienic surroundings more than local

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treatment. All patients should avoid society as much as possible, and, in fact, excitants of any kind.

6. Indulgence in sexual intercourse should be interdicted, or permitted only at very rare intervals. Avoid giving patient temporary sexual stimulants. Their diet should be non stimulating.

BIBLIOGRAPHY.

Psychopathia Sexualis. By Dr. R. von Krafft-Ebing.

Surgical Disorders of the Urinary Organs. By Reginal Harrison, M.D.

Pathology and Treatment of Syphilis. By Dr. A. von Zeissl.

System of Genito-Urinary Disease, Syphilology and Dermatology. By P. Morrow and others.

The Neurosis of the Genito Urinary System. By R. Ultzmann, M.D.

Diseases of the Urinary and Male Sexual Organs. By W. T. Belfield, M.D.

Diseases of the Digestive, Urinary and Sexual Apparatus. By Herman Eichorst, M.D.

3001 Chestnut Street, and Union Trust Building.

Obliterative Arteritis in a Boy Fourteen Years of Age.—An unusual case of this interesting condition, occurring in a young boy, is reported in *The Lancet* by Dr. B. W. Bond, M.B. The case is thus reported by Mr. Bond:

"A boy fourteen years of age came to me suffering from a sharp attack of 'shingles,' extending round the left side of the chest and back. He was evidently in bad health, and on taking his left wrist to feel his pulse I discovered that none could be felt. No pulse could be felt anywhere in the left upper extremity until the subclavian was reached. Here the beat was synchronous with that of the right subclavian, but much feebler. The radial and brachial arteries could be felt as cord-like bodies. On questioning the boy, he said that beyond occasionally having 'pins and needles' in the left arm and fingers he had felt no inconvenience whatever, and, in fact, he was unaware of the condition. He usually suffered from chilblains during the winter months, especially on the feet. The collateral circulation was evidently good, for beyond a slight blueness of the fingers there was no other visible sign of deficient nutrition. The temperature of the fingers was practically the same on both sides, and there was no anesthesia. As regards cause, there was no sign of cervical rib or pressure on vessels, the heart sounds were normal, and no specific or rheumatic history could be obtained. There was no sign of congenital syphilis elsewhere. The pulse in the right radial was normal, and no undue thickening of arterial walls could be felt. The interest of the case lies in the early age of the patient. I have seen a similar condition at the age of twenty-three and twenty-four years, but believe it to be rarely seen in a patient as young as fourteen years.

EDITORIALS

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DR. F. J. LUTZ, General Surgery.
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DR. E. C. RUNGE, General Medicine.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 2940 Locust Street, St. Louis.

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The Confirmation of Doctors Blickhahn and Runge.

In spite of the efforts to thwart the confirmation, by the City Council, of Dr. Blickhahn as Superintendent of the City Hospital, efforts which were persistently and energetically carried on by two well-known gentlemen of this city, members of the same school of medicine, devoted to the same methods and principles, belonging to the same race and believing in the same forms of beau ideal in medical matters, for all of which they are now known as the Siamese medical twins to some and a double-headed monster of mischief making to others, in spite of all these efforts Dr. Blickhahn has been confirmed by the Council.

There probably never was an applicant for the office of City Hospital Superintendent who has been more persistently and villainously misrepresented and persecuted by medical thugs than Dr. Blickhahn in innumerable interviews with newspaper reporters. His utter inability for the place has been discussed over and over again by those worthies and the phenomenal energy which they did display in hunting up and buttonholing certain members of the Council, whispering in their ears the direst accusations, were worthy of a better

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cause. Besides his utter incompetency in medical matters generally and in the practice of surgery in particular the heineous crime was charged against him that years ago he held an office under a democratic coroner. The defeat, which here as in many other undertaking these representatives of the medical push sustained will, of course, not discourage them. They are used to ill-treatment and will soon cast about for another job, simply for another chance to do somebody up. They will never be convinced of their unpopularity.

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Dr. Runge too, in spite of the machinations and devices of his enemies has received the confirmation of his appointment as Superintendent of the Insane Asylum, a place for which in the opinion of all those who know this gentleman he is peculiarly well fitted. Already he has contributed to the neurological literature of our country a number of valuable papers and we predict that he will leave the institution when his term expires an accomplished psychiater.

Missouri State Medical Association.

The many papers which have been announced to be read at the coming meeting of the Missouri State Medical Association, the titles of which are published in this issue, speak most eloquently for the prosperity of the Society. The desirability of a closer bond of union between all the respectable members of the profession of our State has often been expressed and it should be the pride of every physician in this State to still increase the usefulness of its meetings by attending as faithfully as possible. The indications are that the meeting will be a most interesting and profitable one.

Some Positive Statements in Favor of Diphtheria Antitoxin.

Among the many dissenting views and observations with regard to the real merit of diphtheria antitoxin it must be admitted that the vast majority of reports up to this date are decidedly favorable to this treatment The experience of Behring, Roux and many clinicians, that every case of true, uncomplicated diphtheria will get well under the serum treatment has also found the support of many physicians in private practice.

Among the chaos of pessimistic and contradicting statements the observations and most positive statements of Heidenhain, of Coeslin, are very encouraging. This author claims that if from six to ten hours after the injection of serum no improvement in the general condition of the patient, accompanied almost constantly by a marked lowering of the temperature or if, after twenty-four to forty eight hours after an injection no pronounced demarkation or partial solution of the diphtheritic deposit takes place, the process is not a purely diphtheritic, but a complicated one, in other words, it is a mixed infection. This will always be confirmed by a microscopic examination.

Regarding the alleged occurrence of albuminuria in consequence of the injection of serum Heidenhain states that in his cases albuminuria was *always present before* the serum was injected. All the cases, twenty-four in number, from which he draws his conclusions, were of a grave nature.

These observations go far towards proving the claims of those holding that every case of pure, uncomplicated diphtheria will yield to the serum treatment and appear to be a splendid verification of the experiences of Behring and Roux.

Death of Dr. Richmond's Son.

We are sorry to record the death of the son of Dr. J. M. Richmond, of St. Joseph, President of the Missouri State Medical Association. He was a very promising young man, twenty-two years of age, one of six sons, of whom this is the final loss. He died on the 8th inst., in St. Louis, where he was engaged in business, after an operation for appendicitis.

We wish to extend our sympathy to Dr. Richmond and his family in their sad loss.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, April 13, 1895; the President, F. D. MOONEY, M.D., in the Chair.

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DR. T. E. MURRELL read a paper (see REVIEW, May 11, 1895) entitled,

MUSCULAR ADVANCEMENT FOR SQUINT, WITH PRESENTATION OF CASES.

DR. CHARLES BARCK agreed with the essayist on most points. The prognosis as to the real mathematical results in most cases of strabismus is difficult; in fact, binocular vision in the whole range of movements of both eyes is obtained only in those cases where sight is normal and alike, or nearly alike, in both eyes. In a paper which has just appeared in the *Archives*, Dr. Zwecker, of Berlin, says that our knowledge as to the final results is relatively poor. We lose sight of most of the cases. On this account he has taken special pains to request these patients to come back and report for a number of years, and has found that not more than between five and ten per cent of cases gain a real mathematical result; referring, of course, mainly to the most common forms of convergent strabismus.

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In a paper recently published by Lindburg, of Paris, the author advocates abandoning single division of the muscle, and favors advancement of one muscle exclusively, without tenotomy of its integument. He claims that with the former operation the movements of the eye are sometimes limited to a considerable degree, whilst in the case where advancement is done alone the range of movements is rather larger than before operation. He reported a large number of cases with very exact records of movement measurements made before and after operation. The time is too short, however, to judge as to the correctness of his theory and its results. Speaker had done a number of advancements without tenotomy, but was not satisfied with the results.

The operation for advancement is done differently at almost every place. It is done differently in Vienna from Berlin, and different in London and all other places; and so also in New York. The simplest is the best way to make the operation.

As to the results of the operation speaker said there is hardly an operator alive who has not had the misfortune to have divergent strabismus as a consequence of the operation for convergent strabismus. This result does not come at once, and there are a large number of cases where we can be satisfied with the primary result, especially where the operation is done on children between six and ten years of age; but in a large number of cases divergent strabismus develops secondarily. This is not the case after the patient is twenty years of age, and here we can safely try to get the normal condition as near as possible.

Dr. A. D. Williams agreed that it is often very difficult to get the eyes exactly straight. Even where the results are perfect, so far as the position of the eyes is concerned, the resulting vision is unsatisfactory. Double vision sometimes results, and this is due, in the speaker's opinion, to a "want of identity" of the retinæ—an asymmetrical arrangement of different parts of the retinæ. A case in point was that of a young man, operated upon by speaker some years ago, who had an extraordinary convergence, causing very imperfect vision. The convergence was only partly corrected by division of both internal recti. Upon testing the vision closely afterwards patient was found to have single vision at six inches from his eyes; but inside of this point his eyes diverged, and outside of that point they converged. It was impossible to get the eyes perfectly straight, and the convergence is now about half corrected. He was advised to let them alone, as any further attempt at straightening them would lead to strabismus biopia.

As to the secondary results of the operation, speaker differed from the views just expressed. According to his experience a considerable degree of convergence resulted secondarily in those cases where the eyes were perfectly straightened at the operation. It has been his custom, whether operating on a child or a grown person, to get the eyes perfectly straight at the operation, and if any deviation is expected to get slight divergence. When healing takes place the muscles retract and the eyes come back to their normal position.

Dr. Murrell agreed with the views expressed by Dr. Barck, and in the matter of simple advancement of one muscle without tenotomy of the other, his experience tallied exactly. It has very little effect generally. He had tried it several times, but before allowing the patient to leave the operating table concluded to make the tenotomy, although the muscle, at the time, had been advanced as far as was thought proper.

As to the time when we should operate for squint, that involves many important points. He should not be in too great a hurry to operate for squint in children. The refraction is nearly always at fault, and it should be corrected. After squint has once become established and a fixed condition tenotomy should be done. In young children we should be careful never to quite correct it. If you get perfect correction at the time of operation it will very likely be followed, two or three years later, by very perceptible divergence. The most beautiful results occur in those cases where a perceptible amount of convergence is left at the operation.

The application of prisms is of no avail whatever, except in the phonas, where the eye has a tendency to bear out of the right line. It is said by some writers that there is a want of symmetry in the arrangement of the retinæ—that the yellow spot in one eye or the other is out of position. We also have in strabismus what is called excentric fixation. In these cases the point of fixation is outside of the place where Nature intended it to be, and persons in this condition see best with their eyes fixed in the crossed position.

The case of binocular vision, referred to by Dr. Williams, was probably due to insufficiency of the muscles—a lack of mobility or range of movements—where there is convergence for distance and divergence for near vision. Those cases are very difficult to deal with and we can achieve only medium results.

Dr. Barck does not believe in the so called want of identity of the retinæ. There are no anatomical proofs of such a difference; while, on the other hand, there are proofs to the contrary. We find a large number of cases where one eye is far inferior to the other, as far as the sight is concerned, and where we can not recognize the reason with the ophthalmoscope. If an accurate examination of these cases is made it speaks directly against the theory of want of identity, and we can only assume that the case must be higher up in the tract of the optic nerve, or in the visual center. This can be proved in cases where the sight is normal in both eyes and which squint in spite of it. Simply let both eyes fix and then cover one after the other alternately. They return to the normal, so that the axis of the eye is directed to the point of fixation. In such cases we must absolutely exclude such a "want of identity" of the retinæ as a cause of the strabismus.

* * *

Dr. Henry Jacobson read a paper (see page 381 of this issue) entitled,

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NOCTURNAL POLLUTIONS AND SPERMATORRHEA.

DR. PINCKNEY FRENCH thought that spermatorrhea is an extremely rare disease, and that masturbation, unless pursued with a frequency that is almost unknown in the human family, is not as injurious as young people are ordinarily led to believe. He had been frequently approached by men presenting symptoms similar to the ones described in the paper, and has always found that the trouble existed more in the head than elsewhere. The results of treatment in these cases depend more upon getting the confidence of the patient than on anything else. Nocturnal emissions will not be injurious to health where they do not occur too frequent, and once or twice a week is not too frequent.

Speaker had never seen the trouble associated with any of the local conditions described by the essayist. If spermatorrhea is caused by hemorrhoids or other rectal troubles, which we know are frequently due to habitual constipation and other causes and are very frequent, it would be very much more common.

In the case referred to, where the man masturbated twice a week for a month and then overcame the habit and had no further trouble, it is hardly reasonable to suppose that the practice caused the nocturnal emissions years afterwards.

DR. T. E. MURRELL considers masturbation a vice, and a contagious one at that. It is a vice of idleness, and the best treatment is to give the boy a sound thrashing and put him to work, so that he will sleep when going to bed. Boys usually learn it from one another, and if a boy is not surrounded by bad companions he will very likely not develop the habit; although, in a few exceptional cases, it is learned by friction of the clothing, etc.

Speaker had known of a great many cases of habitual masturbation where the practice had been kept up for years, but where no evil results had followed. The evil effects exist usually in the mind alone.

DR. ROBERT FUNKHOUSER believes that heredity is a very important factor in the development of these repuquant vices; that is, masturbation and all the other forms of sexual perversion, including the prevention of procreation. There is probably a neuropathic or psychopathic condition of the individual present, which will sooner or later lead to the development of the habits. In that way alone we explain the existence of masturbation in children as early as in the third year.

He agreed with the statement that spermatorrhea is comparatively rare; it is in most cases prostatorrhea. Although in many cases no perceptible injury may be produced, where the habit is indulged in excessively—from four to six times a week physical and psychical impairment will result—the nervous system will become impaired and the individual will become a moral and physical degenerate.

Speaker had had some experience in the treatment of these cases, and considered hypnotism the only positive remedy. In this position he is supported by Krafft-Ebing and others. It is the only hope for a cure for an individual who has developed the habit, and the remarks made to-night, that it is necessary to gain the confidence of your patient, applies to suggestion. It undoubtedly holds where the patient has lost his will-power, and no evil has ever been known to result from its employment, although speaker himself had applied it more than one hundred times.

DR. W. H. MAYFIELD thought that a large per cent of patients in the insane asylums are so confined as a result of the evil effects of masturbation.

DR. F. R. FRY said that it ought to be a perfectly practical easy matter to settle this subject among practical people. It is doubtless true that most boys and a good percentage of girls masturbate; in fact, there are not enough exceptions to the rule to count for anything in the consideration of the subject. But if a person, even in youth or later, has occasion to consult a physician on account of masturbation or spermatorrhea, in ninety-nine cases out of a hundred he is a neurotic of some description, and it is only in that class of patients in which there is any difficulty.

Of course, the question comes up as to how to treat that class of patients. It is simply one of treating any class of neurotics. There are grades of neurotics, from those suffering with neurasthenia to those suffering with manifold evidences of degeneracy in which the neuropathic taint is deep. The simpler cases are usually persons of enough discretion and intelligence to understand a simple talk, and to avoid the habit if a true exposition is made to them of the subject. If they are not possessed of sufficient will-power to avoid the habit there is little to be done with them. They go on and develop manifold symptoms of degeneracy, or of more or less well established neuropathic conditions, and terminate as confirmed neurasthenics, paranoiacs or criminals.

The talk of masturbation sending persons to the insane asylums is not founded on facts. Masturbation is simply one of the incipient evidences of a neuropathic condition that would lead to their confinement whether they masturbated or not.

Speaker believed that there is an injury being done when people propose to treat a patient locally for masturbation or spermatorrhea *per se*. If there is a pronounced disease of the urethra, or any other portion of the genito-urinary tract, it should be treated; but in announcing ourselves ready to find a local condition for masturbation or spermatorrhea, we are doing harm.

DR. A. R. KIEFFER thought that nocturnal emissions always depend upon some local lesion, such as hyperesthesia of the urethra. Marriage will not relieve this condition, although sexual intercourse might cover it up temporarily. If intercourse is interrupted for any reason the emission will recur. The condition should be treated locally.

DR. FRY asked the speaker how he would determine this condition.

DR. KIEFFER.—By introducing a small, warmed, well-oiled sound. It gives as much discomfort as would

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ordinarily be found in the manipulations in searching for a stone.

Dr. Fry.—How would you treat such a case?

Dr. Kieffer.—I would follow such a course as Dr. Jacobson suggests.

Dr. Johnston divides the cases into two classes, those due to a general neurotic condition and those caused by local lesions. If due in some local lesion, they ought certainly to be treated.

The physician should be very careful about advising patients suffering with nocturnal emissions to get married. The trouble might be due to some local lesion of gonorrheal origin, which would then be transferred to the wife.

Dr. Fry agreed with the statements of Dr. Johnston, but we should not lose sight of the fact that a large proportion of patients suffering with post gonorrheal conditions do not have nocturnal emission. That leads us to the conclusion that there are other causes, and these, in all probability, are in the nervous system. The nocturnal pollutions are a small item to be taken into consideration in attempting to cure post gonorrheal conditions, and there are more reasons for wanting to cure such conditions than simply to stop the emissions.

Speaker asked Dr. Kieffer to what he ascribed the hyperesthetic condition of the urethra.

Dr. Kieffer considered it due to masturbation. The condition of congestion of the prostate gland and other parts of the sexual organs does not resume its natural state after masturbation as it does after sexual intercourse.

Dr. Jacobson said that the hyperesthetic condition of the urethra is often due to ungratified sexual desire, as well as to masturbation. Of course, all masturbators are liars and do not admit to what extent they indulge in the habit; but we must always look for nervous conditions as a cause for spermatorrhea and not jump at masturbation.

There are well-authenticated cases where young children, two years of age, have developed the habit. It is usually caused by a local irritation of the genito-urinary organs in these cases, such as a tight prepuce and stone in the bladder, but may also be caused by meddlesome nurses.

Medical Association of Missouri.

The thirty-eighth annual meeting of the Medical Association of Missouri will be held in the Opera House at Hannibal, Mo., May 21, 22 and 23, 1895.

Tuesday, May 21.

morning session, 10 o'clock.

1. Meeting called to Order.—By the President.
2. Prayer.—Rev. S. D. Dutcher.
3. Address of Welcome.—Hon. C. Albertson, Mayor.
4. Address of Welcome.—Dr. J. N. Baskett.
5. Response.—President J. M. Richmond.
6. Reading of Minutes.—Secretary F. R. Fry.
7. Report of Committee on Arrangements.
8. Report of Committee on Scientific Communications.
9. Report of Committee on Credentials.
10. Shock.—T. E. Potter, St. Joseph.
11. Rational Medicine.—W. F. Mitchell, Lancaster.
12. Adenoid Vegetations of the Vault of the Pharynx and their Relations to Diseases of the Middle Ear.—Hal Foster, Kansas City.

afternoon session—first day, 2 o'clock.

13. Report of Committee on Surgery:

a. Pathology of Tubercular Arthritis.—J. F. Binnie, Kansas City.

b. Symptoms of Tubercular Arthritis.—Jacob Geiger, St. Joseph.

c. Treatment of Tubercular Arthritis.—T. F. Prewitt, St. Louis.

14. Immunity from Disease, Natural and Acquired. L. I. Matthews, Carthage.
15. The Removal of Small Septal Projections by Means of Sharp Curettes.—H. W. Loeb, St. Louis.
16. Pleuritic Effusions with Special Reference to Surgical Treatment.—J. P. Thatcher, Pisgah.
17. A Board of Medical Examiners versus the Diploma Law.—Daniel Morton, St. Joseph.

evening session—first day, 8 o'clock.

18. President's Address.—J. M. Richmond, St. Joseph.
19. Cancer, Its Treatment.—G. Wiley Broome, St. Louis.
20. Alnhum with Specimen.—A. H. Ohmann-Dumesnil, St. Louis.
21. Auto-Infection, with Report of Cases.—G. R. Highsmith, Carrollton.
22. Wherein and to what Extent the Wearing of Glasses is Abused.—T. E. Murrell, St. Louis.

Second Day, May 22.

morning session, 9 o'clock.

23. Practical Points on Abdominal Drainage.—Pinckney French, St. Louis.
24. State Aid to Scientific Medicine.—A. C. Pettijohn, Brookfield.
25. Tuberculosis and Its Treatment by Physiologic Therapy.—Paul Paquin, St. Louis.
26. Some Observations on Nuclein Therapy.—J. N. Baskett, Hannibal.
27. Sero-Therapy in Bone and Joint Tuberculosis.—G. W. Cale, St. Louis.
28. Some Surgical Sins.—Emory Lanphear, St. Louis.
29. The Pathology and Treatment of Empyema.—F. J. Lutz, St. Louis.
30. Mode of administering Quinine in Malarial Diseases.—R. L. Johnson, Rolla.

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31. The Osteopathic Fad.—A. J. Steele, St. Louis.

32. The Meaning and Import of Casts in the Urine Without Albumin.—Ludwig Bremer, St. Louis.

AFTERNOON SESSION—SECOND DAY, 2 O'CLOCK.

33. The Mechanism and Management of Occipito-Posterior Positions.—W. H. Bryant, Savannah.

34. Injuries to the Head.—Jabez N. Jackson, Kansas City.

35. Ulceration of the Sigmoid Flexure as a Sequel of La Grippe, with Report of Cases.—Leon Strauss, St. Louis.

36. A Few Remarks Relative to Left Inguinal Colotomy.—S. G. Gant, Kansas City.

37. After Care of a Laparotomized Patient.—A. H. Cordier, Kansas City.

38. The Treatment of Compound Fractures.—A. L. Fulton, Kansas City.

39. Plastic Surgery.—R. M. Funkhouser, St. Louis.

40. Brain Tolerance of Uremic Poison.—J. Brummel Jones, Kansas City.

EVENING SESSION—SECOND DAY, 8 O'CLOCK.

41. Therapeutics.—I. N. Love, St. Louis.

42. Puerperal Septicemia.—H. C. Crowell, Kansas City.

43. Bronchitis from Intestinal Auto Infection.—H. C. Shutte, West Plains.

44. Report of some Complications met with in Midwifery.—Tinsley Brown, Hamilton.

45. The Signs of Degeneracy in Various Diseases of the Nervous System.—Frank R Fry, St. Louis.

46. Observations in an Endemic of Diphtheria.—A. B. Miller, Macon City.

37. The Examination of the Prostate.—T. C. Witherspool, St. Louis.

48. Appendicitis.—O. B. Campbell, St. Joseph.

49. Legislation in Missouri of the Prevention of Blindness in Children.—H. M. Post, St. Louis.

THIRD DAY, MAY 23.

MORNING SESSION, 9 O'CLOCK.

50. A Resume of the Alcoholic and Opium Treatment.—J. O. Ducker, Louisiana.

51. Successful Treatment of some forms of Obesity by Desiccated Thyroid Gland.—Hugo Summa, St. Louis.

52. The Technique of Cataract Extraction Including the Antiseptic Preparation of the Eye, Prior to any Cutting Operation on the Eyeball.—B. E. Fryer, Kansas City.

53. The Rubber Bulb in Operations on the Bladder.—F. Reder, Hannibal.

54. Traumatic Separation of the Lower Epiphysis of the Femur.—A. H. Meisenbach, St. Louis.

55. When is Removal of the Uterine Appendages Justifiable?—C. C. Morris, St. Louis.

AFTERNOON SESSION—THIRD DAY, 2 O'CLOCK.

56. Some Propositions in Abdominal Surgery.—Jno. H. McIntyre, St. Louis.

57. Physiology of Quickening.—R. H. Goodier, Hannibal.

58. Perineal and Uterine Lacerations with Statistics of 329 Cases.—W. H. Mayfield, St. Louis.

59. The Legitimate Field of Orthopedic Surgery.—A. J. Steele, St. Louis.

60. A Short Note on Neurasthenia.—A. B. Shaw, St. Louis.

61. Some experiences in Pelvic and Abdominal Surgery.—A. V. L. Brokaw, St. Louis.

62 Traumatic Suppurative Synovitis of Knee, Operation with Perfect Restoration of Function.—H. C. Dalton, St. Louis.

N. B.—The Council of Administration, composed of the President, Vice-Presidents and the Secretaries of the Association, will meet Tuesday, May 21, at 9 A.M., at the Park Hotel.

OFFICERS.

President.—J. M. Richmond.

Vice-Presidents.—J. P. Thatcher, J. N. Baskett, A. B. Shaw, J. McComb and H. C. Crowell.

Recording Secretaries.—Frank R. Fry, P. L. Kabler.

Corresponding Secretary.—C. F. Wainwright.

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Committee on Arrangements.—T. Chowing, E. F. Hornbech, J. S. Howell.

Committee on Credentials.—D. Morton, J. H. Thompson, T. B. Hall.

Committee on Publication.—L. Strauss, J. R. Lemen, C. G. Chaddock.

Committee on Scientific Communications.—J. C. Mulhall, A. L. Fulton, J. H. Duncan.

Committee on Medical Ethics.—L. Bremer, R. H. Finley, R. L. Johnson.

Committee on Progress of Medicine.—J. Brummell Jones, L. I. Matthews, E. S. Cave.

Committee on Progress of Surgery.—J. F. Binnie, T. F. Prewitt, J. Geiger,

Committee on Medical Education.—J. Sharp, A. W. McAlester, E. C. Evans.

ABSTRACTS

MEDICINE.

The Pathology and Clinical History of Influenza.—Dr. R. C. Newton read a paper at the Society of the Alumni of Charity Hospital on this subject. He stated that the first accurate record of the

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disease had been in the year 1510, and that it had reappeared at intervals of about twenty years. In the great epidemic of 1889–'90 it had traveled from St. Petersburg to New York in six weeks, which had surpassed all former records; its speed in crossing the earth had increased with improved facilities of travel. The disease was difficult to diagnosticate, as the symptoms resembled those in other fevers. Typhoid fever, cerebro-spinal meningitis, and typhus fever would soon reveal their true nature; but dengue or dandy fever was so like the grippe that some thought it the grippe of hot climates. Bacteriology was a great help, and the bacillus of Pfeiffer was probably the true cause of the disease. Animals were affected, and the contagion was alleged to spread from them to man. The connection between cerebro-spinal fever, pneumonia and influenza had been pointed out more than once. In short, both pneumonia and cerebro-spinal fever might be produced by various bacteria. The grippe bacillus, for instance, might produce either or both of them, as well as the typhoid bacillus. The connection between influenza and cerebro-spinal fever had been alluded to in the "Transactions of the American Medical Association" in 1866, when it had been stated that the "spotted fever," which occurred at the same time as the grippe, resembled it so closely that many thought the contagion of the epidemic influenza in its intensity might produce spotted fever. In influenza the virulence of all micro-organisms was raised to the highest degree. This fact explained the frequency of secondary infections, giving rise to the various complications and sequelæ. Old nervous troubles were apt to be relighted and to burn with increased energy. An old and supposedly cured syphilis would return to plague its possessor. One especially noticeable feature of the complicating lesions of this disease was their tendency to bilateralism, orchitis and otitis particularly showing this, which was a powerful proof of its microbic origin. Of the nervous lesions, every form of nervous disease and every form of insanity seemed to be caused by grippe. Autopsies were rare, as the disease was seldom fatal, but two had been reported in which death had occurred as a result of brain lesion; in both, hemorrhagic foci had been found in the white and gray substance of both hemispheres. In eleven other autopsies intense hyperemia of pia mater at the base of the brain had been present; the arteries had been distended and the consistency of the brain and spinal cord had increased. It was believed that this hyperemia was more than an evidence of vaso-motor disturbance, and pointed to the natural association between influenza and epidemic cerebro-spinal meningitis. The contagion was very pervasive, short-lived, and seemed to thrive best in cold weather. We were probably at or near the end of the epidemic of 1890. In was a wonderful and interesting disease, and the prospects of its true etiology, pathology and diagnosis being established on a sure foundation by the bacteriologists was a matter for profound congratulation.—*N. Y. Med. Jour.*

A Case of Tetany, With Autopsy.—Koester (*Goeteborg's Lak. Forhand.*, 1894, p. 145; *Univ. Med. Jour.*) describes an interesting instance of this disease in a baker, aged 21 years, whose mother and sister were subject to attacks of cramp Six months before the patient was seen by Koester painful contractions had set in without any known cause, being more aggravated when the air was chilly and less in warm weather. These contractions gradually increased in intensity until, on the patient's entrance into hospital, they affected the muscles of the eyes, arms, chest, and especially the abdomen and legs. There was difficulty in swallowing and retention of urine. The cramp was at times tonic, at others clonic, but usually the patient could overcome them by an effort of the will. The muscles were tender, but not atrophied or paretic. The fists were clenched during an attack; Trousseau's and Erb's symptoms were pronounced; there was intense reaction of the muscles to mechanical irritation, but the facial symptom of Chvostek was absent, as was also the patellar reflex. The other reflexes were present and sensibility was normal. The post-mortem examination showed primary atrophy of the kidney and circumscribed hemorrhages in the anterior portion of the cauda equina and about the nerve-roots from the third to the fifth nerves in the neck on both sides. There was also hemorrhage and hyperemia of the sheath of the ischiatic nerve and the surrounding connective tissue in the left leg. The nerve trunks, spinal cord, and brain were macroscopically normal.

Edinger's Theory of the Cause of Neuritis and Tabes.—Edinger (*Jour. Nerv and Ment. Dis.*) bases a theory upon the following laws:

1. The functionation of every organ causes in it molecular changes. The organ suffers a certain damage, which must be repaired. When this repair is adequate to the amount of function, the organ is strengthened by functioning. Otherwise it undergoes retrogressive changes.

2. A damaged or weakened tissue soon decays, and makes place for the surrounding tissues which grow into it. What has heretofore been called proliferation, hypertrophy, interstitial inflammation, etc., has been proved by Wiegert to be only an ingrowth of healthy tissue into diseased tissues.

In the so-called gray atrophies of the central nervous system the cardinal tissue is always first diseased, after which this weakened tissue becomes proliferated and retrograde; then destroyed by the neuralgia. This overgrowth of the neighboring tissues can not but damage the whole organ. This overgrowth of interstitial tissue, caused by decay of the motor fibers in a nerve, must also damage the sensory fibers contained in it.

Edinger thinks that by appreciating the importance of these facts many observations, heretofore unexplained, can be comprehended.

If there is a disproportion between function and restitution in such a manner that the restitution is not suf-

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ficient to cause the tissue to return to its former condition, a degeneration of the tissue must follow. This disproportion will occur in cases of absolute overfunction—when, for instance, a certain group of muscles or nerves is over exerted. In some cases, even where the restitution would be complete for a normal amount of function, it would occur still easier if, aside from overfunction, restitution was impaired by deficient nutrition (as Edinger finds it to be the case in the so-called occupation paralysis of cigar rollers, etc.). But even with a normal amount of function, nutrition may be so deficient as to prevent sufficient restitution. In the latter case those parts which perform comparatively the largest amount of function would have the greatest disposition to degenerate.

That there are diseases of the spinal cord which are intimately connected with disturbances of nutrition in the central organ, is proved by the existence of tabic symptoms in diabetes, by degenerations of the posterior columns or pyramidal tracts of dogs in whom artificial circulatory disturbances are produced by rapid rotation, etc.

It will also be easier to comprehend why multiple neuritis is seen accompanying or following such a large number of diseases (anemia, tuberculosis, contagious disease, as measles, scarlet fever, etc.), by assuming that as a consequence of exhaustion constructive metabolism in most of these cases cannot furnish the amount of restitution which the (normal) function of nerve and cell requires.

Applying the theory to tabes, disturbances of equilibrium and ataxy of gait are the earliest symptoms of this disease, as those nervous apparatus which contribute the muscular sensations necessary for the maintenance of equilibrium and gait are used in an uncommonly high measure. The said symptoms, indeed, are the earliest and most important ones. We also find tabes chiefly in persons who over-exert their legs (military officers, railroad employes, foresters, etc.), while we find it seldom in women who have more sedentery habits. This also explains the rare occurrence of tabes in puellæ publicæ, although they are so frequently affected with syphilis, the indirect etiological importance of which Edinger does not underrate.

The frequency of certain accompanying symptoms, as papillary disturbances, atrophy of the tongue, of the peroneal muscles, muscles of larynx, etc., is also explained by the unusual amount of function performed by these parts. It is not strange, either, that ophthalmoplegia progressiva is frequently combined with degenerations in the posterior columns.

Edinger considers that the progressive character of progressive general paralysis is also satisfactorily explained by his theory. He is convinced that the nerve tissue is always first affected in this disease. The more nervous substance that is destroyed the more do the remaining healthy parts of it become exerted, which again causes further decay of nervous tissue, etc.

The numerous forcible arguments put forth in defense of Edinger's theory speak highly for its validity. Its application to the comprehension of tabes in its manifold varieties and of the progressive character of general progressive paralysis, seems particularly convincing.—*Amer. Med.-Surg. Bulletin.*

SURGERY.

Is Etherization by the Rectum Permissible?—In the *Quarterly Medical Journal*, Stedman, of Sheffield, published an article upon "Rectal Etherization," in which he details ten cases in which he administered the anesthetic by passing the vapor of ether into the rectum. He concludes his remarks by stating that he can not understand why this method is not more frequently resorted to, and most strongly urges its employment by all hospital surgeons, particularly in operations about the face or mouth, during which, as every one knows, it is difficult to administer ether by the respiratory passages.

This subject which is thus brought before the profession once more is one of very considerable interest. Undoubtedly there are strong therapeutic reasons for administering ether otherwise than by inhalation in all operations about the face and mouth, and particularly in those persons who have a tendency to, or who already have developed, bronchitis or other pulmonary trouble.

On the other hand, we believe that the disadvantages of this method exceed any gains which it may bring to us. The suggestion that ether be employed in this manner is by no means new, it having been resorted to as long ago as 1847 by Pirogoff, and since then by a number of European and American surgeons, among whom may be mentioned Dr. Weir and Dr. Bull, of New York.

Certainly a sufficient number of cases have been anesthetized to have called the attention of the profession to the possibilities of such a procedure, and we believe that its less general employment rests upon the fact that the average experience has been against its further trial.

Stimson asserts that several deaths have resulted from it, and Weir has reported an instance of a child of eight months who received the vapor of two ounces of ether by the rectum and who died the next morning, melena having supervened.

In the New York *Medical Record* of May 3, 1884, Dr. Bull has also published seventeen cases, in seven of which melena took place, and there are a large number of cases in which violent irritation, diarrhea, or other evidences of intestinal inflammation have followed the use of ether in this manner.

On the other hand, it is worthy of note that so skilful an anesthetizer as Dr. Dudley Buxton strongly urges its use under the circumstances that we have named, stating that its only disadvantages consist in the greater

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length of time required to anesthetize the patient and the subsequent discomfort which is sometimes present. He believes that if the vapor of ether is gently passed into the rectum, the greatest care being exercised that none of the liquid itself finds entrance, the disagreeable symptoms will not frequently occur, and directs that the bottle containing the ether, to the amount of 2 to 3 ounces, should be plunged into a second vessel containing water at 120° F. The ether vessel communicates by an india-rubber tube with a glass intercepter devised to prevent the entrance of liquid ether into the rectum, and from this last is run another short tube to the anus. The usual symptoms of anesthesia are developed generally more rapidly in children than in adults, and Buxton states that the time required varies from three minutes to thirty minutes.

Taking all things into consideration, we think we may conclude that while etherization by the rectum is possible and, in very rare cases, permissible, that the circumstances calling for it should be very extraordinary before the surgeon should resort to this method of producing anesthesia.—*Therapeutic Gazette.*

Diagnosis Between Cauda Lesion and Lesion of Lumbar Cord.—Schultze (*Zeitschr. f. Neuenheilk.*) reports the following case: The patient, male, 21 years old, three years after a fall on the hips of twenty-five feet, suffered with pains in the loins and hips, radiating to the legs, numb feeling extending to the knees, incontinence of urine and feces. After nine months was able to stand and walk with aid of crutches. Gait unsteady, with knees rotated outward and on tip toes. From eighth dorsal vertebra lower down, sensitive; second lumbar vertebra somewhat prominent. Marked atrophy of lower thigh muscles; left gastrocnemius, soleus, tibialis anticus and posticus entirely paralyzed. Right thigh, all the muscles paralyzed. Gluteal region, both sides atrophied. Severe involvement of the muscles supplied by the sciatic and superior and inferior gluteal, while those supplied by the crural and obturator nerves remain normal. Fascicular contraction of the atrophic muscles, especially the gluteus maximus, on both sides; complete reaction of degeneration in the muscles supplied by the peroneal nerves, with the exception of peroneus longus and extensor communis digitorum. In the calf muscles partial degenerative reaction. Simple strong diminution of direct electrical irritability in the glutei. Loss of patellar reflex on both sides. When the patella was tapped on one side there followed an inward rotation of other leg. No ankle clonus or plantar reflex. Cremaster reflex weak, abdominal and bladder reflex normal.

Incontinence of urine, except with strong effort. Weakness of detrusor vesicæ and sphincter ani; no priapism, power of ejaculation and erection preserved. Sensibility in both thighs almost completely lost, except in region supplied by saphenous. Marked anesthesia on posterior surface of thighs as far up as the middle of the gluteal region and of scrotum and perineal region. Just above and below Poupart's ligament a zone of hyperesthesia of the nerves, showing paralysis all come from the sciatic plexus except the posterior cutaneous of thigh and the external spermatic. The author asks, Are these conditions due to a primary injury of the cauda equina or to injury of the lower segments of the lumbar cord, including the conus terminalis, or are both parts injured? That there was injury of the lower part of the spinal column there is no doubt, but he inclines to the view that the spinal cord itself remained uninjured. He cannot entirely subscribe to Valentine's opinion, that the prognosis in injury to the cauda equina is favorable.—*Am. Med.-Surg. Bull'n.*

The Status of Ether in Germany.—Bruns (*Berlin. Klin. Woch.*) in commenting upon the steadily increasing popularity of ether in Germany,—a popularity based on statistical study which shews how much safer this agent is than chloroform,—calls attention to the fact that there is a beginning reaction in favor of the more dangerous agent on the part of a few surgeons, these men holding that, although Gurlt's statistics conclusively prove that the immediate danger of ether is many times less than that of chloroform, the remote danger is greater when ether is administered, and that from broncho-pneumonia entirely due to the irritating effect of ether vapor upon the lungs patients frequently perish who would have been saved had chloroform been employed. Thus, Czerny says that he frequently saw light cases of bronchitis and emphysema after ether narcosis. These usually cleared up quickly, but sometimes ran into serious bronchitis and bronchorrhea, and in some cases even into severe broncho pneumonia. This last complication occurred in a number of patients who could not expectorate the mucus which accumulated in the throat because abdominal operations rendered coughing extremely painful. He states that he lost two patients on the eighth day from this cause, both these patients being entirely free from bronchitis before operation and the wound running a sterile course.

Mikulicz, after a six months' trial of ether, abandoned it, because he observed a number of light cases of bronchitis and two cases of pneumonia.

Poppert has described a case of ether death due to edema of the lungs, and has collected six other cases in which death occurred following lung congestion after etherization. Poppert ascribes all these deaths directly to the ether, and comes to the conclusion that if statistics were collected in which all the late effects rightly belonging to this agent were included, it would be found to be twice as dangerous as chloroform.

In this relation it is interesting to note that the causative relation of ether to these deaths is by no means proved; that pneumonia is a very common sequel of belly operations, no matter what anesthetic has been used; that acute congestion frequently occurs as the result of profound shock, often from an accident, for instance, when absolutely no anesthetic has been employed; and that, as pointed out by Bruns, it is easy to find in

the practice of those who employ chloroform exactly the same complications occurring, although they are not attributed to the effect of the drug. Moreover, it has been conclusively proved that the remote effects of chloroform are infinitely more serious than those of ether, since the former drug has been shown by Ugar, Strassmann, Ostertag and Fraenkel to produce fatty degeneration, while ether Selback has shown to be absolutely free from this danger; and, moreover, Wunderlich has proved that albuminuria and cylindruria are more frequently observed after chloroformization than after etherization. Bruns cites two cases of sharp bronchitis occurring after the use of chlorform which undoubtedly would have been ascribed to ether had this drug been employed.

It is quite certain that the vapor of ether is more irritating to the mucous membrane than that of chloroform, since the former agent always causes an increased secretion of mucus and saliva. When the irritation is more than a simple transitory hyperemia, and is sufficiently intense to excite acute inflammation, it is probably due to idiosyncrasy or impurities in the ether. It has long since been shown that ether kept in the light decomposes and forms irritating products. Bruns affirms that admixture of air with the ether produces similar results, and advises, therefore, that ether should be stored in jars which are completely filled with the agent, which are firmly closed and protected from light and kept in a cool place until used. If at an operation all of the contents of the flask is not used, the remainder should not be employed for narcotizing, but only for external use. He laments the absence of a special ether for narcotizing purposes in Germany, and hopes that ultimately the work of the pharmacist shall be so directed that the surgeon can be sure of an absolutely pure product.

Fortunately, in this country Bruns' complaint finds no place, since the ether commonly employed for anesthetizing has been repeatedly shown to be absolutely pure. Doubtless the suggestion of Bruns to have the vessel completely filled is a good one; certainly his advice to discard for anesthetization portions of a can left over and stored for several days, or even weeks, is sound. Probably most surgeons have now and again made trials of cheaper ethers than the preparation which has received the endorsement of the leaders of the profession.

Speaking from personal experience, the writer is fully in accord with Bruns when he states that effects other than an ephemeral irritation of the mucous membrane are to be attributed to impurities in the drug, since with less carefully prepared preparations there is nearly always more prolonged and violent vomiting, at times serious bronchitis, and exceptionally spitting of blood or pulmonary edema, these complications no longer developing on adoption of the standard preparation. It is apparent that though there are some individuals who have reverted to the more rapid and more pleasant chloroform, ether is steadily gaining ground in Germany, and will ultimately be as generally used as it is in England or even in the northern section of this country.—*Therapeutic Gazette.*

Cardicentesis—Case of Endocarditis and Pericarditis, With Effusion; Accidental Tapping of Right Ventricle after Apparent Death; Recovery.—On May 12, 1894, the patient, female, aged 19, was seized by a severe attack of erysipelas of the face. She did well under ichthyol and lanolin externally and iron internally. On the fifth day the temperature had become normal, all signs of inflammation had disappeared, and cure seemed established, when suddenly a very severe attack of rheumatic fever developed.

In childhood the patient had suffered from bronchitis, measles, diphtheria, and two attacks of rheumatic fever. About a year previous to the present illness she had scarlet fever, followed by a third sharp attack of rheumatic fever, with accompanying endocarditis. This left a well-marked systolic mitral murmur, which, however, in the course of a few months, entirely disappeared, and with the exception of slight edema of the right foot, the patient enjoyed good health, until within a few weeks of her present fourth and most severe attack of rheumatic fever.

In her present attack salicylate of sodium was administered, together with aromatic spirits of ammonia, and fair progress was made, the temperature varying from 99° to 103°, but with a distinct tendency to an evening rise. The pains, however, were not relieved to any great extent. Dover's powder, 8 grn., was given at bedtime with marked benefit, as a few hours' sleep was induced and the restlessness somwhat allayed.

On the morning of May 24 patient complained of slight precordial pain and a feeling of oppression about the chest, and in the evening a well marked friction was audible over the whole base, but loudest and apparently nearest the ear over the pulmonary area. Besides the sodium salicylate and digitalis internally, warm poultices and sinapisms were applied locally, with the result that in five days the friction had entirely disappeared. Still, the temperature kept irregularly rising and falling in a suspicious manner, and the muscular pains in the limbs became even worse. Salicin and antipyrin were ineffective; salol lowered the temperature somewhat, but did not diminish the pain.

At this time the urine contained no albumin, but was scanty in amount, and the urates were in excess. On the evening of June 4 there was a return of the friction, and in addition a well-marked systolic-mitral murmur was audible.

Every movement was accompanied by excruciating pain; nourishment was taken with difficulty; an irritable, hacking cough developed; the pulse became rapid, feeble and dicrotic, and the respirations were greatly increased. Physical examination revealed effusion into the pericardium. Some pleuritic effusion was also present.

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From the 8th to the 11th patient grew worse, the

changing color of the face indicating the possibility of a fatal issue at any moment. All anti-rheumatic remedies were stopped and stimulants, in the form of champagne and brandy, were freely given, while a mixtuae of strophanthus, strychnine and iron was added, with a view to keep up the heart's action.

On June 13 the pulse was very rapid and barely perceptible, and there were all the indications of approaching death. Ether was injected. The author proposed tapping, but was still met with objections, as had been a previous suggestion to this effect. In a few moments the heart action and respiration ceased.

The author then says: "In the moment of excitement I jumped up, seized the aspirator, and plunged the needle into the fourth interspace, about half an inch to the left of the sternum, and a little below the left nipple. To my astonishment, from eight to ten ounces of pure blood flowed rapidly into the bottle of the aspirator, and then suddenly stopped, and to my dismay I found I had penetrated a cavity of the heart. As I was slowly withdrawing the canula, regretfully telling the nurse it was all over, and to close the patient's eyes, to my surprise the heart made first a feeble, irregular movement, then gave a sudden jump, and finally, like a pendulum regaining its swing, it started to beat again."

More ether was injected, but had to be followed by morphine, as the patient became maniacal.

The next morning consciousness completely returned, and the patient was able to take some light nourishment. Two days after the operation, the temperature fell suddenly to normal, and the pulse from 104 to 40, while the slightest movement caused paling of the lips and face. In three weeks, except for great debility, the patient was physically perfectly well, the systolic-mitral murmur being the only persistent indication of what she had passed through. Within seven weeks the patient was up and about, and since then has enjoyed perfect health.

The author cites a great many experiments, and draws the following conclusion:

1. Puncture of the heart, especially the right ventricle, stimulates muscular contractions, and may be advantageously employed in the treatment of chloroform narcosis.

2. The best results are obtained when abstraction of blood from the cavity of the ventricle is combined with the stimulating effects produced by the entrance of the aspirator needle.

3. Puncture of the right ventricle is a safer and more efficient operative procedure than puncture of the right auricle.

The practical question is: If cardiac tapping can be done successfully by accident, are there any cases where it should be tried as a deliberate remedy? The author believed it to be the proper treatment in all cases of asphyxia, where the heart's action has stopped; *e.g.*, in cases of suffocation by drowning, accidental hanging, or from coal-gas, etc. The writer adds that in cases of chloroform asphyxia it is worth trying, and in some cases of heart affection, of pneumonia, and even of bronchitis, where all other means have failed, and where the patient is evidently dying of engorgement of the right side of the heart, a possible chance of saving life might be lost were cardiac aspiration not attempted.—Allen Thomson Sloan, M.D., in *Edin. Med. Jour.; Am. Med.-Surg. Bull.*

Subcutaneous Injections of Quinine.—As subcutaneous injections of quinine are frequently employed in concentrated solutions, Fleischl desired to determine whether a part of the salt, at least, is not precipitated when brought in contact with a tissue the reaction of which is alkaline, and perhaps remains undissolved for some time at the site of injection. This would account for the pain sometimes present at the place of injection.

Experiments were made on rabbits, with the muriate of quinine, bimuriate, hydrobromate, and bisulphate; warm concentrated solutions of half a gramme each being injected into the subcutaneous connective tissue of the back, and the solution being well disseminated in the tissue by massage. After one quarter or one-half an hour had elapsed, an incision was made at the place of injection, and the result found to be the same in all cases: The quinine, in no instance, was precipitated, but the tissue at the site of injection was extremely succulent, and the fluid entirely clear. Under the microscope the crystallization of some quinine preparations, commencing at the edge of the cover glass, and slowly creeping toward the center, could be noticed; the hydrobromate precipitated the most readily, the bimuriate slowest. Of the four salts, the bimuriate was found to be the most desirable for subcutaneous use.

The indications for the subcutaneous use of quinine are the following:

1. In severe malarial infections, where the fever remains high for many hours, and severe symptoms, such as coma, convulsions are present.

2. Cases in which malaria patients are comatose, and therefore can not swallow.

3. In cases where it is desirable that quinine gain access to the circulation quickly, and where the stomach or intestines are in a pathological condition, in which instances large doses by the stomach will not be absorbed.

4. Where there is a tendency to vomiting or the patient has already vomited quinine which had been administered.

5. In cases where the patient can not swallow quinine in wafers. Strong solutions of quinine are so bitter that few patients can take them, and pills will sometimes pass through the intestines without becoming dissolved.

6. In children, wherever quinine is indicated, in malaria, pneumonia, whooping-cough.

Quinine tannate, on account of its tastelessness, is recommended for children; is a good astringent, but of little value as an antipyretic. The action of quinine

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when injected subcutaneously is very rapid and certain, and the method is perfectly harmless.—Dr. O. v. Fleischl, in *Fortschr. der Medic.; Amer. Med.-Surg. Bull.*

Treatment of Penetrating Wounds of the Chest.—In the *Revue de Chirurgie* for January 10, 1895, there appears an interesting article on the conduct of the surgeon, in the case of penetrating wounds of the chest by side-arms, by Huguet and Peraire, who quote numerous observations by Terrier and Lucas-Championniere, and by themselves.

The *code duello* is so much in vogue in France that even in the "piping times of peace" there is abundant opportunity for the study of this class of wounds.

The authors make very clear by observations that early removal of such patient from the field is extremely dangerous, unless every precaution be taken to immobilize the chest-wall so far as possible. The following is a summary of their conclusions:

1. There is absolute necessity of treating the wound ed at the place; the gravity of the concussion communicated by transportation, whether the journey is long or short, gives even stronger reason, as treatment may be performed in the carriage. If it is necessary to transport the wounded to a distance, the inevitable jolting of the vehicle will produce hemoptysis or accentuate it, and this may induce the death of the patient.

2. The state of syncope favoring hemostasis may be respected in a certain degree, but it may become necessary to make moderate subcutaneous injections of ether, to the end that the depression may not become too considerable. It is in such cases that, above all, we may have recourse to caffeine and to hypodermic injections of artificial serum.

3. The treatment of penetrating wounds of the chest by ordinary means (cold applications and iced drinks, injections of ergotin, compression, antisepsis, ligature of vessels, suturing of the wound) appears to us insufficient in many cases, unless immediately subjected to as absolute immobility as possible. Thanks to this absolute rest which results from forced immobilization of the entire pulmonary apparatus, there is obtained a condition from the outset which alone may insure success.

4. It goes without saying that this immobilization does not exclude the ordinary means mentioned.

5. In case of hemothorax consecutive to a lesion of a great vessel there is no urgent need; the phrase armed neutrality never finds a better application than in such circumstances. It is necessary to be guided by the symptoms and, above all, by the complications, to come to a determination. It is not necessary to resolve upon thoracentesis until the effusion becomes too considerable and the dyspnœa excites serious fears for the case.

6. The indications are, in all cases of penetrating wounds of the chest, to banish the permanent dressing; to make an elaborate dressing of the wound, being restricted to the necessities of the case, and to always avoid jolting or concussions.

The treatment recommended must commend itself to all military surgeons, notwithstanding this subject has furnished food for discussions from time immemorial.—*Jour. Amer. Med. Ass'n.*

Surgical Treatment of Graves' Disease.—According to the Berlin correspondent of the *Medical Press and Circular* for January 30, 1895, Dr. F. Lemke, of Hamburg, has had the opportunity of treating a series of more or less serious cases of Graves' disease by operation, the result of which he has published in a recent number of the *Deut. Med. Wochenschrift.* All the cases operated on were alive at the time of writing, with the exception of one woman, who died of influenza three months after operation. In all, the more important symptoms were relieved—the exophthalmos, the thyroid enlargement, the excessive nervous unrest, the intolerable trembling of the hands, all disappeared—and in two the tempers were noticeably improved. The operation consisted in partial removal of the thyroid gland. The author thinks the operation, as performed by himself, is not so difficult as it is thought or as it used to be. As soon as the skin, muscular structure and fascia are divided for a distance of four centimetres in the line of the inner border of the sternomastoid, the struma is seized with Spencer Wells' pressure-forceps and drawn forward. Its separation from its surroundings is in this way simple and bloodless. It is then ligatured and cut away. The patients were quite recovered by the fourteenth day. The cosmetic results were very striking. Eight histories of cases are related by the author.

Professor Garre has proceeded by another method in his treatment of enlarged thyroid. During two and one-half years he treated one hundred and fifty cases at the Tubingen Poliklinik by injections of iodoform. The results of the treatment were so "surprisingly favorable" that he believes he can recommend it, and the more so as it can be carried out whilst the patients are going about. The solution he has tried has been: iodoform, 1 part; ol. olivæ and ether sulph., each 7 parts. The fluid must be kept in the dark. When the original bright yellow transparent fluid has become muddy and dark from decomposition of the iodoform, it is no longer fit for use. The part of the thyroid to be injected is fixed by the second and third fingers of the left hand and at the same time pressed back against the spine. Care being taken to avoid veins, the canula of an ordinary subcutaneous syringe of a capacity of one cubic centimeter is then plunged into the tumor. Whilst the needle is in the growth it is held tightly and the patient tries to swallow. If within, the canula moves upward and downward during the process. The contents of the syringe are then injected, a small piece of plaster being placed over the puncture on withdrawal. The injection is said to cause at most a slight burning pain, due, no doubt, to the ether. Sometimes the patients complain

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of pain in the ears or teeth, which soon passes off. Other complain of the disagreeable taste of the iodo form for days. No other accompanying ill effects have been observed. He considers the injection to be absolutely free from danger. As a rule, the injections have been repeated every two to five days. The number required have varied from three to sixteen, the average being seven.

The final results were determined in eighty-seven cases. In eighty one there was a diminution of the circumference of the neck of from two to seven centimeters, in eighty-six a slighter decrease—*i.e.*, two centimeters and under; in ninety per cent, therefore, a favorable result was obtained. In eight cases there was no abatement, and in two actual increase took place. He considers the simple hyperplastic struma and the diffuse nodular form to be the most suitable for this treatment. The vascular form is also suitable, but the treatment will have to be continued longer. As many as nineteen injections will be required.

The Pulse in Clinical Surgery.—The *Revue Inecrnationale de Medicine et de Chirurgie Pratiques* for March 10, contains a review of a work by M. Francois Bertonnier on this subject (*N. Y. Med. Jour.*). In this interesting work, says the writer, the author first recalls Marey's statement as follows: "The pulse is the sensation of sudden swelling felt by the finger which palpates an artery. The blood-vessel that allows itself to be depressed becomes suddenly hard each time that a systole of the heart increases the arterial tension." Bertonnier then considers this physiological phenomenon with regard to its frequency, its power, and its rhythm. In two chapters he explains the connection between the pulse and the temperature, also the usefulness of examining the pulse in cases of severe hemorrhage. His principal conclusions are the following:

1. The discordance of the two curves, that of the temperature and that of the pulse, is often an indication of a serious condition.

2. In grave hemorrhage the great depression of the pulse that accompanies it has sufficed occasionally to indicate the drue diagnosis.

3. In traumatic shock or that following an operation the degree of slenderness, of frequency, and of irregularity of the pulse will be the most exact measure of the violence of shock and of the patient's vital resistance.

4. In traumatic crania-cerebral lesions extreme slowness of the pulse is a never-varying sign of concussion, of contusion, or of cerebral compression. Eventually, its acceleration with elevation of temperature is a sign of meningo encephalitis.

5. The pulse should often be a guide in surgical interference in traumatic or inflammatory affections of the abdomen.

6. The absence of arterial pulsation at the extremity of a member is a very important sign and calls for a prompt determination.

Finally, the pulse, under the influence of chloroform, by its irregularity, intermittence, and arrhythmia, indicates, even better than auscultation of the heart, that the valvular lesions are badly compensated for, and that there is danger in the administration of chloroform.

OBSTETRICS AND GYNECOLOGY.

Removal of the Uterine Appendages in the Treatment of Uterine Myoma.—The history of Dr. Cullingworth's treatment of his twenty cases forms an important contribution to gynecology. The records of the cases are given clearly and in sufficiently full detail for the reader to form his own judgment on the diagnosis and on the treatment, in the "St. Thomas Hospital Reports," vol. xxii., 1894

One of the expressions in the description of the operations which frequently occurs is this: "No douche or deep sponging was used, and the abdomen was closed without drainage" In spite of the absence of drainage, as will be seen, the results, so far as mortality and the ultimate objects to be sought are concerned, are satisfactory.

All the patients recovered with the exception of two, who both appear to have died of intestinal obstruction. Deducting these cases, and some others on account of the recent date of the operation, fourteen of the twenty cases are available for studying the ultimate effects of the treatment. The results are claimed to be very satisfactory in 78 5 per cent, fairly satisfactory in two cases, and unsatisfactory in one case. In one case in which pressure-symptoms existed before operation did the operation fail to give relief. Menorrhagia was present in eighteen out of the twenty cases before operation, and in one case it persisted. The conclusions arrived at by Dr. Cullingworth, from his own experience, are as follows:

That it affords an almost certain means of relieving all the more dangerous symptoms in cases in which removal of the tumor or tumors is either impracticable or likely to be attended with special difficulty or grave risk.

That it is unsuitable in cases where the tumors have attained a verg large size, or have become edematous, or have undergone cystic or other degenerative change.

That it is peculiarly applicable to those cases in which the tumors are for the most part intrapelvic, and in which operative interference is required for the relief or prevention of dangerous pressure symptoms.

That its field of usefulness is likely to become curtailed in proportion as the technique of abdominal hysterectomy improves and the mortality of the latter operation diminishes.

That although, in experienced hands, its mortality is not high, it should never be regarded or spoken of as a slight or minor operation.

That it is impossible to know beforehand whether

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it will be an easy or a difficult or even a practicable operation.

That the relief is not generallg so prompt, or con valescence so free from interruptions, as in an ordinary case of ovariotomy, or even of abdominal hysterectomy.

That before being submitted to the operation a patient should, in the interests both of herself and the operator, be made fully aware of the uncertainties that specially attend it.—*Med. Chronicle.*

The Treatment of Asphyxia Neonatorum.—Rosenthal (*Therapeutische Monatschrift*) recommends the following method on account of its being less tiresome to the operator than the swinging method of Schultze and more gentle towards the child, yet affording in asphxia as good results without disadvantages. The child is laid upon a table with the neck supported by a roll. The operator seizes the feet so that the thumbs are in contact with the soles, the index finger with the back of the feet and the ring-finger resting upon the tendon of Achilles; the remaing two fingers are closed. In regular movements the knees, hips and spine are bent, so that the knees touch the breast. In this manner the abdomen is compressed and expiration follows; by stretching the body out inspiration follows. The larynx is not compressed by this method, as is pos sible for it to be by the Schultze method. This method may also be employed where fracture of the arm or of the clavicle is present.

Another mode consists in the suspension of the child by the legs. The advantage of this is the discharge of the inspired amniotic liquor and blood from the nose, mouth, trachea and bronchi. At the same time the operator seeks to favor the removal of the aspirated fluid with the finger, causing attempts at vomiting, which compress the lungs. By this means aspirations pneumonia is safely avoided. The legs should never be held in the naked hand, but with a towel, in order that they may not slip.—*Univ. Med. Mag.*

Diagnosis of Pelvic Inflammatory Disease.—Dr. Kelly, of Baltimore (*Amer. Jour. Obstet.*), in a recent paper drew attention to the following facts:

1. His remarks were addressed for the most part to the general practitioner.

2. The history of the patient and sensitiveness over the ovarian regions, whether by deep abdominal or vaginal palpation, can but rarely *per se* establish a diagnosis of pelvic inflammatory disease.

3. An attempt to make a diagnosis witnout directly palpating the disease is at best clever guesswork.

4. The diagnosis can be made with certainty when resisting masses are felt choking the posterior half of the pelvis at the sides of and behind the uterus.

5. It is possible to mistake in this way a retroflexed fundus, an extra uterine pregnancy, a myoma, or a carcinoma for inflammatory disease. The error, however, will be in the right direction and not to the injury of the patient when she comes into the hands of the specialist.

6. For a more delicate appreciation of the exact condition of the pelvic organs, and in most cases in order to make the diagnosis at all, a bimanual examination by rectum and abdomen under anesthesia is indispensable.

8. The trimanual examination, acting at the same time by rectum, vagina, and abdomen, is the most delicate method of all, serving to detect the slightest irregularities in uterus and ovaries, as well as the most delicate adhesions.

8. Finally, constant practice, utilizing every available chance, will alone enable a man in general practice to appreciate these points so simple to the trained nurse.

Absorptive Power of the Vagina.—Recently observations have been made regarding the absorptive power of the vagina under various conditions of health and disease. Iodide of potassium is easily absorbed; if a tampon soaked with a twenty per cent solution be introduced into the vagina, iodine can be found in the urine in an hour—the excretion reaches its maximum in twenty hours and ceases in forty-eight hours. Fever and pregnancy increase the absorption. Hysterectomy makes no difference. Iodoform is absorbed slowly and in very small quantities, but more if fresh than old. Salicylic acid is absorbed quickly, appearing in the urine in one hour and disappearing in twenty-four hours. Salol is very readily absorbed. In brief, the vagina has undoubted absorptive power, and this is increased in pregnancy, in the puerperal state, and in pyrexia.—Coen, in *Collezione Italia di Letture Sulla Medica.*

NOTES AND ITEMS

Grave Robbery by Students.—Five students of the University Medical College of Kansas City were arrested on November 28, 1894, in Oak Grove Cemetery, in the act of robbing graves. The students were lodged in jail, but subsequensly released on bail.

A Free Hospital is Not Liable—In a case recently appealed to the Supreme Court of Connecticut where the plaintiff claimed damages for alleged maltreatment in the Waterbury Hospital, the Court sustained the plea of the defense that the Hospital was not liable, as the treatment was made without charge and the attending physicians had no fees.

American Medical Association.—At the meeting of the American Medical Association the following officers were elected for the ensuing year:

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President—Dr. R. Beverly Cole, of California.

First Vice-President—Dr. J. J. Chisholm, of Maryland.

Second Vice-President—Dr. J. G. LeGrand Cole, of Alabama.

Third Vice-President—Dr. Augustus B. Clark, of Massachusetts.

Fourth Vice-President—Dr. T. P. Satterwhite, of Kentucky.

Treasurer—Dr. Henry P. Newman, of Illinois.

Secretary—Dr. Frank Woodbury, of Pennsylvania.

Librarian—Dr. G. E. Wire, of Illinois.

Members of the Board of Trustees—Dr. Alonzo Garcelon, of Maine, I. N. Love, of Missouri and James E. Reeves, of Tennessee.

The following were named as delegates to the meeting of foreign medical societies.—Dr. W. H. Daly, of Pittsburg; I. N. Love, of St. Louis; C. G Chaddock, of St. Louis; L. N. Montgomery, of Chicago; A. E. Rockey, of Portland, Or.; I. N. Quimby, of Jersey City; J. H. Ouchterlony, of Louisville, Ky. and H. H. Biedler, of Baltimore.

Next year's Convention will be held at Atlanta.

Serum-Therapy of Erysipelas and Puerperal Fever.—M. Roger claims to have discovered a new fact in relation to serum therapy (*Brit. Med. Jour.*). He renders mules immune, and thus obtains a serum which cures erysipelas and puerperal fever. On February 6 a patient at the Maternity was treated with this serum for puerperal fever. Her general condition was very grave. Eight grammes of serum were injected without any result; the next day an injection of 16 gm. was followed by a slight improvement. On the third day after an injection of 25 gm., the improvement was rapid; eight days afterwards the patient left the hospital. M. Roger's serum is efficacious in all maladies owing their origin to the presence of streptococci. Dr. Marmorek reports that he has used the serum in 46 cases of erysipelas with complete success.

Of the One Hundred and Forty Medical Schools of the United States, there are, we believe, only fourteen which absolutely require a four-year course of medical lectures. Nearly one hundred schools announce that they graduate on three terms of lectures, and about twenty-five on two terms, the length of the term varying from five to nine months. The four year colleges are:

New York—College of Physicians and Surgeons, Medical College and Hospital for Women, Homeopathic Medical College and Hospital, Woman's Medical College of the New York Infirmary.

Pennsylvania—University of Pennsylvania, Woman's Medical College of Philadelphia.

Massachusetts—Harvard University Medical School, Boston University School of Medicine.

Michigan—Department of Medicine and Surgery, University of Michigan, Homeopathic Medical College.

Illinois—Northwestern University Medical School.

Tennessee—Maharry Medical Department of Central Tennessee College.

Maryland—Johns Hopkins Medical School.

North Carolina—Leonard Medical School.—*Medical Record.*

The Antiseptic Duel.—A curious account of the latest application of antiseptic surgery in duelling occurs in a recent number of the *Revue de Paris* in the novel entitled "L'Enfant de Volupte." The combatants enter a room in a house situated in the suburbs of Rome, and there find two surgeons busied in disinfecting the blades of the swords with a solution of carbolic acid in water, the odor filling the room. There is a table covered with bandages, dressings, vessels of carbolized water, and cases full of little glittering instruments of steel. The rivals strip to the waist, and the fight begins outside. One of them is wounded in the forearm, but so slightly that no dressing is required and the duel is about to be continued when the unwounded man inadvertently touches the ground with the point of his weapon. A surgeon instantly rushes forward with a sponge saturated with water and disinfects the blade afresh. In the next bout the same man is struck under the right nipple, but the point has touched a rib, which prevents it from penetrating. The surgeons then make pressure on the little wound, wash it with an antiseptic, put on a bit of pure strapping, and allow him to go on. In the last round the wounded man strikes his adversary full in the chest, and he falls back into the arms of his second. Presently the senior surgeon announces "penetrating wound of the chest at the level of the fourth left intercostal space, involving the surface of the lung." Perhaps in another encounter the novelist may advance a step further, have the candidates thoroughly scrubbed and disinfected overnight, and then despatched to their place of meeting in sterilized shirts.—*Medical Record.*

Bright's Disease a Blood Disease.—Professor Semmola asserts that the fundamental pathological condition necessary for the passage of albumin through the kidneys—and hence for the production of Bright's albuminuria—is the morbid diffusibility of the seroalbumin which is a true dyscrasia in Bright's disease and a primary etiological condition (*Med. Rec.*). This view is for the most part confirmed by the latest investigations of Freund on the changes of the blood in Bright's disease. Semmola is convinced that in the majority of cases—acute infectious diseases, toxic, rheumatic, and gouty dyscrasias—the albuminuria always arises from modification in the diffusibility of seroalbumin, resulting from molecular alterations in the blood. When in these cases a nephritis exists, it is the result of the same diathetic condition, or due to the effect of the albuminuria on the kidneys. The egg albumin arising from nephritis, if no general dyscrasia is added to the arterio-sclerosis—arterial and gouty nephri-

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tis due to uric acid deposits—is very small—0 30 to 0.50 per 1,000—while the amount of albumin secreted from a dyscrasial condition of the blood, when this is the primary effect of the disease, rises to two, to four, or even up to twenty grammes per litre, as is the case in Bright's disease. Continued subcutaneous injection of egg emulsion causes albuminuric retinitis, and during life the animals experimented or show weakening of vision.

Metorrhagia and Ruptured Hymen Caused by Bicycle.—The bicycle craze is spreading writes a Paris correspondent to the *Medical Record*, and several of our most eminent physicians may be seen almost any Sunday morning wheeling gracefully and quietly along the now shady avenues of the Bois de Boulogne.

No question has aroused more discussion and difference of opinion in the Academy of Medicine than that of bicycling—indeed it was discussed at several stated meetings, being warmly advocated by some, and as strongly condemned by others. The consensus of the Academy's opinion seems to be that moderate exercise on the bicycle is advisable in neurasthenia, anemia, dyspepsia, gout, and obesity, in all cases of slowness of nutrition, and where moderate muscular movement is required. It is absolutely forbidden in phthisis, organic disease of the heart, and albuminuria. Married women and young girls are fast following the example set them by the men—the latter, especially. For them it is not ill-suited but dangerous. The writer knows of two cases of metorrhagia brought on by mild bicycling, and another of ruptured hymen from falling on the pummel. Some have immovable bicycles in their bedroom, the framework being screwed to the floor and the wheels moving just as on the road. The amount of injury done to the pelvic organs of young girls just reaching womanhood will not be long in making itself felt in the shape of uterine versions and flexions, or cellulitis, to say nothing of other such serious complications as those mentioned above. The Parisian gynecologists will undoubtedly soon have more than they can conveniently attend to if matters continue as they have begun.

Intestinal Obstruction in Children.—Dr. Monti, after discussing the causes and general symptoms of intestinal obstruction in children and accepting in the main the views of Leichtenstern, gives the following points as those which are of value in forming an opinas to the site of the obstruction (*Brit. Med. Jour.*):

1. In the lower part of the colon the first symptom of acute obstruction is painful colic, and the region of the abdomen in which the colic is first felt may afford some indication of the part of the colon obstructed. Vomiting does not occur until the colic has lasted for some hours or days; it is at first bile stained then becomes foul, and finally feculent. Collapse sets in late; gaseous distention of the intestine begins in the colon, and at first it may be possible to make out that it is limited to the region occupied by the colon (flanks and epigastrium), but later the ileum also becomes distended, and the tympanites may reach a very high degree. In incomplete obstruction the symptoms are the same, but develop more slowly. Action of the bowels may occur, and be attended by temporary relief, especially of the tympanites. If the rectum be incompletely obstructed, constipation alternates with attacks of painful tenesmus, followed by the passage of small scybala. Circular constriction of the rectum causes the motions to be of small caliber.

2. Acute obstruction in the lower part of the ileum is attended with frequent attacks of painful colic, starting in the ileo-cecal region. Each paroxysm of colic induces an attack of vomiting, the vomited matter being at first the contents of the stomach, but later fecal. Collapse sets in early. The distention of the abdomen is most marked at first in the umbilical and hypogastric regions, but in time becomes general; it is not notably diminished by vomiting. At first several fecal stools may be passed, but after a few days there is complete constipation. The quantity of urine is diminished after the first few hours or days, and there may eventually be suppression. When the obstruction is incomplete the colic may be as severe, and the movements of the coils of intestines perceptible. The degree of distention may vary greatly in a very short time, and this independently of the passage of a stool. The constipation, after lasting some days, may be succeeded by copious foul diarrhea.

3. Acute obstruction in the duodenum or jejunum causes severe colicky pain, starting about the umbilicus and radiating toward the stomach. Vomiting comes on early, and is violent; the vomited matter is at first bile-stained, later it becomes foul smelling. Gaseous distention is slight, and is limited to the epigastrium. It may be very much diminished by vomiting, but collects again. The bowels may at first act spontaneously or after enema, but eventually there is complete constipation. Suppression of urine is established early. When the obstruction is not complete, the symptoms are similar but less severe. The colic is painful, and the vomiting, either in relation with the colic or independently, very frequent. The quantity of urine is diminished. There is no distention of the abdomen, and diarrhea alternates with constipation. Monti considers that if a case is seen early much may be learned as to the probable seat of the obstruction by observing the way in which the tympanites develops.

Insomnia.—Nothing lowers the vital forces more than sleeplessness, which may be traced generally to one of four causations: first, mental worry; second, a disordered stomach; third, excessive muscular exertion; fourth, functional or organic disease. Loss of sleep is, when rightly understood, one of Nature's premonitory warnings that some of her physical laws have been violated. When we are troubled with sleeplessness, it becomes requite to discover the primary cause and then

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to adopt suitable measures for its removal. When insomnia, or sleeplessness, arises from mental worry, it is, indeed, most difficult to remove. The best, and perhaps the only effectual plan under such circumstances to reach the root of the disease, is a spare diet combined with plenty of outdoor exercise, thus to draw the blood from the brain, for it is as impossible for the brain to continue active without a due circulation of blood as it is for an engine to move without steam. When suffering from mental distress, a hot soap bath before retiring to rest is an invaluable agent for obtaining sleep, as by this means a more equable blood pressure becomes established, promoting a decrease of the heart's action and relaxation of the blood vessels. Many a sleepless night owes its origin to the body's temperature being unequal. In mental worry the head is often hot and the feet cold, the blood being driven to the brain. In this case the whole body should be well washed over with carbolic soap and sponged with very hot water. The blood then becomes diverted from the brain owing to an adequate diffusion of circulation. Tea and coffee should not be taken of an evening when persons suffer from insomnia, at they directly induce sleeplessness, being nervine stimulants. A sharp walk of about twenty minutes is also very serviceable before going to bed. Sleeplessness is sometimes engendered by a disordered stomach. Whenever the organ is overloaded, its powers are disordered and wakefulness and a restless night are the usual results. No food should be taken at least within one hour of bedtime. It cannot be too generally realized that the presence of undigested food in the stomach is one of the prevailing causes of sleeplessness. Persons suffering from functional or organic disease are peculiarly liable to sleeplessness. When inability to sleep persistently occurs and can not be traced to any perverted mode of life or nutrition, there is good reason for surmising that some latent malady gives rise to such a distressing condition. Under these circumstances, instead of making bad matters worse by swallowing deadly sleeping drugs, an able physician should be, without delay, consulted. Functional disorders of the stomach, liver and heart are often the primary source of otherwise unaccountable wakefulness. Recently the very dangerous and destructive habit of taking sleeping draughts promiscuously, and even giving them to infants and children, has become alarmingly prevalent, entailing ill health, insanity and death as its consequence. Most persons addicted to this destructive habit mistakenly think that it is better to take a sleeping draught than to be awake; a greater mistake could not possible be made. All opiates more or less occasion mischief, and even the state of stupefaction they induce fails to bring about that revitalization resulting from natural sleep. The physiological effect of hypnotics or sleeping draughts upon the system is as follows: first, they paralyze the nerve centers and disorder the stomach, rendering it utterly unfit for its duties; witness the sickness and loss of appetite consequent upon a debauch. Chloral, chloroform, opium, etc., act upon the system much in the way as inebriation; second, one and all anesthetics introduced into the body have life-destroying properties in a *bow depre*, by an overdose, being fatal; third, the condition they induce is not sleep, but a counterfeit state of unconsciousness; fourth, they directly poison the blood consequent upon its carbonization, resulting from their action. While speaking of sedatives, we cannot omit drawing special attention to chloral. This powerful drug is popularly supposed to give a quiet night's rest, without any of the after effects, headache, etc., produced by various preparations of morphia. Now, chloral is what is termed cumulative in its action, which implies that even the same dose persisted in for a certain length of time may cause death. Of all hypnotics chloral is by far the most deadly and should never, under any circumstances, be taken except under medical supervision. To epitomize what has been already suggested, regarding sleeplessness: its natural cure should be arrived at, in each individual case, by seeking out the cause, and then removing the morbid action of which it is but a natural consequence.—W. K. Grayson, Florence, Texas, in *Tex. San.*

We call the attention of the profession to a new aseptic bistouri manufactured by Wocher & Son, of Cincinnati, O. It contains two very good steel blades, which can be separated from the metallic handle by a simple mechanism and are easily rendered aseptic. We recommend the instrument as very practical and useful for the general practitioner. Price, $2.50.

The Value of Iodine.—It has often been my experience to be let out of a tight place, therapeutically speaking, by the use of the iodines, that I rather wonder at myself for not using them more rather than less, and can not help thinking that if all practitioners of medicine have had an experience like mine, the compounds of iodine would head the list of drugs in frequency of use. Instead of using the iodide of potash as I used to do, I employ the calcium salts almost exclusively. My reasons for this are that the potash salts are poisonous if taken in considerable quantities. This has been shown to be the case, particularly in connection with the study of chronic nephritis. Moreover, Prof. Germain See is authority for the statement in *La Medicine Moderne*, for March of last year, that preparations of potash are slow and uncertain in their absorption and elimination. On the other hand, he finds that the iodide and bromide of calcium are easily absorbed, are particularly useful for exerting upon the body the effects of iodine and bromine, and do not cause those gastric disturbances that so often interfere with the administration of potassium salts. Calcium salts enter so largely into the composition of bone and other tissues that they can always be regarded as having a direct nutritive value, and their innocuousness is not alone confined to the absence of irritating effects upon the digestive organs, as they can not be regarded as poisons in any sense of the word. The dose of the calcium compounds is practically the same as that of the potash salts, and their extended trial is worthy of the attention of practitioners of medicine.

I find the Elixir Iodo Bromide of Calcium Compound—Tilden's, in every way satisfactory and entirely worthy of confidence.—William Davis, M.D., of St. Paul, Minn., in *The Journal of Materia Medica.*

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Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

MEDICAL REVIEW.

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ORIGINAL ARTICLES

Systemic Dissemination of Tuberculosis from a Patch of Lupus Vulgaris.

BY ROBERT PETER, M D., TOLEDO, OHIO.

Mr. Jacob W., aged 58 years, always enjoyed seemingly good health excepting that he had a lupus patch just below his left ear. This lupus he had for about ten years. He first came into my hands after it had existed about three years. It began over a very small area below the ear and did not make rapid progress for the first five or six years; but from that time on it commenced to gradually spread until it involved more extensive area. In the last two or three years of its existence, it spread so as to destroy the ear lobule and the tissue in front of the ear. Although the process was rather gradual and slow, it became so extensive as to break through the junction of the aural cartilage and finally it penetrated the anterior temporal vein, that the patient had to send for the writer, to control hemorrhage. Even though every thing in the category of remedial measures—from lunar caustic to mercurial plaster—had been repeatedly and faithfully tried without avail, the patient begged in his dispair, that one more effort should be made of something that might yet have remained untried, to cure his condition if possible.

Just about this time the writer had noticed in a journal that Dr. Carl Von Ruck, of Ashville, N. C., had been testing the efficacy of Kock's tuberculine in lupus cases, that we decided to write to him making enquiry. After describing to him the character and extent of our case, Von Ruck advised against its use, as in his experience he found that tuberculine proved only of benefit in very mild cases; but in cases of extensive character, he found that it intensified the process only *the more*. It was therefore decided not to employ it in this case. However, the bleeding was fully controlled and the patient continued for one year without further marked change, when he was taken down with what was diagnosticated as typhoid fever. The diagnosis was substantiated by the facts that his daughter had typhoid fever sometime previous; that while he had it, his own son was likewise taken down with it; and his nearest neighbor at the same time died from it. He went through this attack of fever very well, but never fully convalesced as he should have done.

This condition soon changed into one of peevishness of appetite, at times a slight hectic fever, colliquative sweats, and of emaciation. Presently his right knee was noticed to swell. A condition of synovitis of the joint developed, and a substantial enlargement of the condyles of the femur took place. The limb was immobilized by means of plaster of-Paris cast and placed into a position of elevation. It did hence not proceed to suppuration; but the swelling of the soft parts went down, the synovitis entirely disappeared, the condyles remaining the same—their enlargement did not recede. The patient continued in this way without much further improvement for a number of week; finally it was observed that over the left renal region a more or less circumscribed prominence had developed, but without any local heat or redness. On thorough investigation it was concluded that pus had formed most probably around the kidney, and that nephrotomy was necessary to remove pus and the diseased tissue, if any be present. This we did, accordingly, by making Koenig's lumbo-abdominal incision. We found that the kidney was somewhat enlarged and entirely imbedded in pus, but its surface seemingly smooth; there were also found large pus pockets extending deeply down into the pelvis. The pus was all drained out and its pockets all broken up; necrosed tissue removed; entire cavities washed out with sterilized water and well packed with iodoform gauze, and antiseptic dressings and bandage applied. The prognosis of such a case is clear. Although the patient could not possibly recover, we treated his condition just as carefully as good surgery always demands for its own sake. The patient tarried in this way for a few weeks and then died from exhaustion.

Physical examination of the chest did not reveal anything positive. There was no well marked cough, nor characteristic expectoration. We do not believe that family history bears the important significance as was formerly maintained. In this instance it was apparently negative. The only evidence perhaps of a tubercular proclivity in the family was, that a more or less distinct impress of pallor could be noticed on all of his children. However, the case presented the most marked evidence of tuberculosis; as shown by the characteristic

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appearances of the knee-joint, the so-called cold abscess, besides the presure of lupus vulgaria. There was therefore no doubt of tuberculosis and that the systemic or deep infection was most probably inaugurated during the typhoid fever. General immunity was reduced by this fever process, and in this way made it possible for the tubercular metastasis to materialize.

One very important lesson that this case teaches is, that general tuberculosis *can be* established by dissemination of the local process of a lupus vulgaris. It is still taught by some dermatologists that deep tuberculosis does not follow the superficial form of lupus. Stellwagon makes the unqualified assertion in his brochure on skin diseases. This case disproves such teaching. Hence tuberculosis of the skin, or so-called lupus vulgaris may eventually wind up in systemic tuberculosis. Whenever and wherever *bacilli tuberculosi* go, it is hard to tell when and where they will come to a halt. Progress evidently resolves itself into a question of degree and quality of immunity. Thus it happens that the process of tuberculosis assumes in one habitation either a more or less fulminating course, or, in another, a more or less attenuated form. In bones, superficial and glandular structures, the tubercular process is always rather slow, while in the lungs it is always comparatively rapid. Hence the terms of scrofulosis and lupus should be excluded from the nosology of disease and the term of tuberculosis always be applied. Lupus vulgaris should always be designated as tuberculosis of the skin. Little over twelve years ago the intimate nature of lupus was still in doubt. It is no longer a disputed question; and this case also most beautifully illustrate the fact of identity of lupus and deep-seated tuberculosis.

It is not probable that the lupus patch of Mr. W. was engrafted below his ear by inoculation with a contaminated razor or other tonsorial contact? From our knowledge of tuberculosis, inoculability suggests itself. This contradicts the old teaching, that lupus is not contagious. It no doubt is inoculable. This matter awakens the practical interest in bears in relation to the arguments why sanitary observance should be exacted from barbers, in properly *sterilizing* their razors, sponges and all material in their use. As a careful people, we must look to the essentials for safety to our health. Barbers inflict mostly but insignificant wounds; but it must be borne in mind, that these are the very ones most favorable to inoculation.

Proper enforcement of tonsorial cleanliness obviously would prevent also many other inoculations, and it is only the proper thing to demand. What a loathsome trouble is sycosis! a most stubborn cutaneous disease; nothing less than a *folliculitis barbæ* inoculated with mycotic parasites which are most always transmitted by means of an unclean razor. What a dangerous thing is syphilis! in like manner it may be engrafted. There should therefore be a law passed, demanding intelligent enforcement of scientific cleanliness from our tonsorial artists. We believe, this is already the case in Germany, and, it should be so here.

Furthermore, in conclusion permit me to suggest the inculcation of clearer and better notions of idear pertaining to infections and their metastases, as they are still very vague in minds of so many medical men. Metastases have so long been only associated with the ideas of so-called pyemia, that their significance can hardly be realized in connection with other than only purely pyogenic processes. We have clearly shown in this case, that we had to deal with metastases from a patch of lupus vulgaris. We have also seen cases of tubercular metastases of the hip-joint follow the primary inoculation in the lungs, and *vice versa*. We have seen cases of tubercular meningitis associated with the same condition in the lungs, where it was difficult to tell the primary infection. And so we have seen a case of diphtheria of the throat followed by a subsequent ulcer of the stomach, from which the patient died. It is high time that we fully remember, that metastases are only new localizations *in locis minorium resistentiarum* from an infection already existing somewhere within the system. Remembering this will often render easy the tracing of effects to a single cause, which simplifies matters often very much.

Some Propositions in Abdominal and Pelvic Surgery, With Illustrative Cases.

BY JNO. H M'INTYRE, A M, M D, ST. LOUIS, MO.

Read before the meeting of the State Medical Association of Missouri, Hannibal, May 21-24, 1895.

Proposition 1.—I think it may be accepted as axiomatic that all operations performed within the abdominal cavity should be done quickly, by well-drilled, skillful, and surgically clean hands.

Proposition 2.—That the shortest possible incision compatible with the work to be done without bruising the tissue is conducive to safety.

Proposition 3.—That the strictest possible period of anesthesia—preferably induced by bichloride of methylene used in the inhaler of Junker is the safest.

Proposition 4.—That no man has a legal or moral right to open the abdomen of a human being, who has not by previous training and observation, so perfected himself for the work that he may be able to meet any emergency that is likely to arise.

Proposition 5.—The unexpected is what may be expected in abdominal and pelvic work—this is paradoxical, but it is true.

Proposition 6.—No man is justified in attempting work of this character unless he is able to make an approximately correct diagnosis.

Proposition 7.—Exploratory laparotomies are the approbrium of abdominal surgery.

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Proposition 8.—The exploratory incision of the expert is a far different affair from that of the tryo or neophyte, for he at once clears up the uncertainty and completes the operation.

Proposition 9.—When once a correct diagnosis can be made it is not only foolish but criminal to advise so-called conservatism, and inactivity, in cases which, if left alone, can have but one ending—death.

Proposition 10.—When once it is certain that an operation will be required, the sooner it is done the better, while the patient is yet in the best possible condition to withstand the ordeal, and before structural lesions have occurred in adjacent or remote organs.

Proposition 11.—That antiseptics should never be introduced into the abdominal cavity, save peroxide of hydrogen, and then only in exceptional pus cases.

Proposition 12.—That chronic surgery and indecision is often followed by disaster. I have witnessed an operation where nearly twenty minutes of time was taken in opening the abdomen, when as many seconds should have been quite sufficient, when the operator asked each one present for suggestions. Certainly he was not the one you would select to operate on your wife, mother, sister or daughter.

Proposition 13.—That those who vehemently decry against the drainage tube, and prate about its dangers in producing fecal fistula, abdominal hernia, etc., have not yet learned to use it properly.

Proposition 14.—I think it may be accepted as true that it is not a needed requirement of success, for a woman to wear a big soppy pad soaked in mercuric bichloride, or any other solution on her belly for two or three days previous to operation.

Proposition 15.—For closure of the ventral wound there is no material that is the equal of silk worm gut.

Proposition 16.—I believe it is true that the general surgeon never did, does not now, and never will have, especially in pelvic work, the equal grade of success which attends him who devotes his best energy exclusively to this class of effort.

Proposition 17.—In my own experience the most difficult and trying cases to deal with are those who have previously been subjected to incomplete or unfinished operations.

Proposition 18.—There is no need of stitch abscesses in clean surgery, although it has been my misfortune to have two in the past six years.

Proposition 19.—There is too much laparotomy done, and too many men are doing it, or rather attempting to do it, and often by those who would not attempt to cut down upon and ligate the common caroted artery.

Proposition 20.—I am further impressed with the belief that this over abundant supply of would be laparotomists is the result of superficial and faulty teaching of many medical colleges; coupled with the fact that those who are really experts are too much inclined to report only their successful cases.

Proposition 21.—And I am still further impressed with the belief that men can be found who are willing—nay anxious to make their maiden effort on the sea of surgery by a sail into the abdomen.

Proposition 22.—In doing an abdominal section it should be the aim of the intelligent and conscientious surgeon to remove incurable disease and save the life of the patient—not attempting, merely to do an ideal operation for the purpose of surrounding himself with a halo of brilliancy for the delectation of those who happen to be spectators, but to do his work with the most painstaking thoroughness, so that there is nothing to explain, nothing to apologize for, and nothing to do over again, for it is a fact that incomplete or unfinished operations are fraught with great danger, and are often disastrous to the patient.

[Note —The illustrative cases will appear in a future issue of the Review.—Editor.]

Remarks Upon a New Series of Operations for Goitre.—Since the first series of 115 operations for goiter, which he published in 1891, Roux has operated upon 177 new patients. These figures must not lead one to believe all goiters are operated upon at Lausanne. No patient is operated upon without having been under the iodide treatment first for some months. As to the use of interstitial injections they have cured some goiters; in others they caused sclerosis, and often the shrivelled masses caused more discomfort than their size. In all cases the ultimate operation was made more difficult.

In this new series of Roux two deaths occurred; one from a brown atrophy of the heart, the other from a suppurative pneumonia.

The indications for operation were as follows: difficult respiration 142; the characteristic modification of the voice appeared in 86 cases; marked wheezing in 36 cases. Difficulty in swallowing is mentioned 49 times; cardiac troubles 54 times. Four patients were operated upon solely because they wished to improve their looks.

Roux relies upon local anesthesia; in the rare cases where general anesthesia was used, he regards the operation as more bloody and more liable to accidents. He used Kocher's method in 104 cases, and that of Socin in 73 cases.

The results are very satisfactory; the symptoms which demanded relief disappeared. But one case of operative myxedema developed.

In two cases not operated on, who died suddenly, Roux does not accept the theory of Kronlein, that death is caused by a violent contraction of the sterno-thyroid and sterno hyoid muscles frequently hypertrophied. Roux believes that the sudden death in cases of goiter is due to a passive congestion of the tracheal mucosa and of all the muscles of the neck, caused by the combined efforts of all of the muscles of respiration.—Dr. Roux in *French Congress of Surgery; Annals of Surgery.*

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EDITORIALS

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The Duestrow Case.

Duestrow is not insane and is capable of appreciating his situation. This is the verdict of the jury which sat in judgment in the illustrious trial at Union in order to decide the question of mental responsibility, or the reverse, of the double murderer Duestrow. The public is rejoicing over the verdict, which is considered by the vast majority of the uninitiated as a good, common-sense view of the matter. It seems to be a universal conviction that the consequence of this verdict will eventually be the hanging of the defendant. The public has been loath to listen to the plea of insanity from the beginning of the trial, and seems to be decidedly in favor of hanging a man who is guilty of so terrible a crime as that of Duestrow. There can be no doubt to every disinterested person that, on general principles and under present conditions, it is best to remove a man like the defendant from a world in which he cannot be of any earthly good to himself or others, and that the only certain and safe way to do this, is to execute him, goes without saying. We make the statement, without fear of being contradicted, that there is not a mentally well-balanced physician in the United States, who does not share this view with the public in general.

But there is a matter of vital importance to the welfare of the medical profession connected with this tragi-comical trial, which seems to place it sion in a most ludricous light; for it is certain that such trials, when experts are employed to give testimony on either side, certainly do not redound to the credit of the medical profession. Every one of them is apt to be ridiculed by the counsel of the opposing party, or even accused of bribery. Thus one of the experts for the State was called by Governor Johnson, a charlatan and an empyric, and another expert, who made his debut at this trial, was complimented as a plaster-of-Paris bust expert. Such a trial will always impress itself upon the mind of the lay and medical observer as a howling farce.

The preposterous idea of allowing a set of farmers who, in this instance, are known not even to read the daily papers, not to speak of any other literature, to decide a question of diagnosis, which is beset with intricacies that are puzzling even to experts in psychiatry. Such men were entrusted with the final verdict of whether the defendant was a victim of paranoia or not.

To every physician, or even an intelligent layman, who has given the matter any thought whatever, this must appear a most comical procedure. Instead of going through the cumbersome examination and cross-examination it would be just as well to appoint a policeman to make a diaguosis.

The vilifying accusations of some of the lawyers that, for instance, the physicians who were summoned as experts for the defense, had been bribed by Duestrow's counsel, it is hardly necessary in a medical journal to refute. Although a thousand dollars may seem an enormous fee to some narrow-minded laymen, every experienced physician knows that the vexations and loss of time, connected with the duties of experts in such trials, are such that the fee is an exceedingly moderate one, particularly when one considers that few experts would leave the city a single day for less than two or three hundred dollars. Moreover, the unpleasantness caused by the thought of being suspicioned by some of the laity, in consequence of the stigmatizing accusations of the lawyers of the opposing side, to which experts are constantly exposed in trials of this nature, far out weighs even a much more munificent compensation. From a purely practical standpoint, it would be very poor policy for any well-quallified and well thought of expert to stake his reputation at any price whatever and knowingly testify to a wrong diagnosis.

We had the good fortune to listen to Dr. Bremer's discussion of paranoia (at the meeting of the St. Louis Med. Society of May 18) in general and of the particular form of paranoia, subacute hallucinatory paranoia, from which Duestrow, in his opinion, is suffering. By the repeated and urgent request of the chair, Dr. Bremer spoke upon the subject, and according to his statements an enormous amount of literature has been gathered upon the subject of paranoia and several varieties of paranoia have been recognized by leading authorities of which the above is the one from which Duestrow is suf-

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fering at present. Dr. Bremer's very interesting elucidation of the subject and its discussion will soon be published in the REVIEW. In drawing deductions from the doctor's remarks, it will become plain to everybody that the subject of paranoia is a much more complicated one than one would be led to believe by the testimony of some of the State experts. The jury in this case was allowed to be influenced by some doctors even who, according to their own statements, had never treated a case of insanity and could, under such circumstances, certainly not be competent to discriminate between the various forms of a most complicated psychical affection. To the influence of such men and a jury of a most illiterate class of farmers was assigned the responsibility of a final decision as to the correctness or incorrectness of the diagnosis paranoia in Duestrow's case.

This farcical, tragi-comical trial constitutes an everlasting monument to the correctness of the old adage that "fools rush in where wise men fear to tread." But there is, in our opinion, one redeeming feature in the result of this trial, namely, that the end may justify the means and that the world will be better off without than with a Duestrow. The public, therefore, has every reason to be satisfied with the efforts of the prosecutors for the State, Zachritz and Merriwether, who have distinguished themselves as most excellent representatives of their profession.

College of Physicians and Surgeons.

It was generally expected by everybody acquainted with St. Louis college affairs that one or the other of the multitudinous colleges would have to close its doors in the near future. For more than a year it has been rumored that the first college doomed to this fate would be the St. Louis College of Physicians and Surgeons. Any medical college whose business, including the choice of teachers, is managed by a board of laymen who, by a majority vote, may discharge any member of the faculty, can not exist permanently. This was the case of the C. of P. and S. Very few competent medical teachers will, under ordinary circumstances, allow themselves to be employed for a year at a time by a number of laymen who, for some individual antipathy or congeniality, may have it in their power to depose or employ any of the faculty members. How are they to judge the capacity of this or that applicant for the honor of a professorship.

A little over a year ago an offer had been made to some of the members of the Beaumont Hospital Medical College to take charge of the College of Physicians and Surgeons, which was very wisely not accepted under the conditions above indicated. The constant changes in the faculty of the College, from the beginning, have been a puzzle to the uninitiated, while after being acquainted with the management of the College nothing else was to be expected. With the heterogenous elements of which the faculty has been made up for many years, which was the natural consequence of such a state of affairs, it is a wonder that the College has existed as long as it did.

We have been informed that the board of trustees have at last succeeded in selling the College to Drs. Briggs, Furney and Morris, who, according to rumor, intend to organize a new faculty. It is to be hoped that these gentlemen will elude the mistakes made by the former board of trustees and thus avoid the constant frictions and changes that have so far characterized the College and have been a constant stumbling block to a successful career. The reputation of these gentlemen who have had ample experience in college affairs is such that we predict success in their undertaking.

CORRESPONDENCE

To Practice Abroad.

Editor MEDICAL REVIEW.—Please kindly oblige me in notifying my colleagues in your valuable journal that I am going to practice this summer at Nauheim, the international bathing place in Germany. Patient going abroad might find it convenient to meet with an American physician there.

Nauheim is situated at the foot of the Caunus Mountains near Frankfort on-Maine, and has become world-famed by its cures of muscular rheumatism, articular inflammation, caries, necrosis of the bone, locomotor ataxia, spinal irritation, hysteria, neurasthenia, and also particular women diseases, such as endometritis, metritis, etc.

Next winter I shall re-commence my practice at my address, 1048 Lexington Ave., New York, where I am now since six years.

Thanking in advance for your courtesy, I am, dear sir, yours very truly, DR. H. J. LOEBINGER.

A Large Infant.

Editor MEDICAL REVIEW.—About a year ago the writer came across a paragraph in one of the leading medical journals contributed by a physician in charge of a labor case, the principal feature of which was that the child, a female, weighed fifteen pounds at birth; the labor lasting fifty-two hours, and challenged the world to furnish a case beating this one in weight. We proceed to gratify the author of the paragraph by reporting the following case:

On December 30, 1887, Mrs. Ed. D. G., her husband being passenger conductor on the Missouri Pacific Ry., and residing in this city at the time, was delivered of a female child weighing seventeen and a half pounds soon

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after birth. Four hours after, to maks sure of no mistake, the child was weighed a second time on a different pair of scales which were known to be absolutely correct, and the weight proved to be the same as at first. The patient was in labor from Wednesday morning until Saturday morning—seventy-two hours.

Conway Springs, Kansas. W. M. Rhea, M.D.

ABSTRACTS

MEDICINE.

General Therapeutics of Cardiopathies.—Drugs do not occupy their former solitary position in cardiac therapeutics. Diet and exercise are equally important. Not long since, hypertrophy was hardly regarded as a purely compensatory process, and by some it is regarded as developing beyond the necessities of the individual case. This view can only be held by disregarding some of the causes of the condition. All treatment to limit excessive hypertrophy is futile, except to remove some of the causes producing it. Enlargement of the heart never extends beyond the point necessary to antagonize the causes producing it. The more we appreciate the dynamical relations of the intracardiac and intra vascular pressure on the one hand, and the nutrition and metabolism of the heart muscle on the other, the more we are in a position to regulate diet and exercise in the individual case, with the possibility of obtaining the best results. It is of the utmost importance to regulate the diet of cardiac cases; not only in chronic organic changes, but in functional disorders also. The aim should be not only to give such food as can be easily and completely digested, but food also which will afford the best nutrition to the general economy, and particularly the heart; at the same time, it must tax the functions of excretion and elimination the least. Heart cases, as a rule, eat too much. Diet should be regulated according to the physical condition and idiosyncrasies of the patient. In functional disorders the nutritive quality of the food is of not as much importance as it is in organic lesions. From the diet of these cases the carbohydrates should be eliminated. Nitrogenized foods are well borne in regular and small amounts. Alcohol and tobacco should be entirely interdicted, and tea and coffee used sparingly. The amount of fluids should be limited and taken between meals. In diseased heart cases, with dynamical cardiac failure, the circulation in the gastric walls must be borne in mind, so that the diet ordered is most nutritious and easily assimilable. The impairment of muscular action of the stomach and the sticky mucus resulting from the congested gastric mucus render digestion more or less uncertain. To such patients obsolute rules must be laid down: Meals must be taken regularly—never less than five or more than six hours between them; no food between meals; not over six ounces of fluids to be taken with meals; small quantities of plain water or seltzer can be taken between meals.

In cases of marked heart failure, with dropsy, if a mixed diet can be taken it is best to limit the amount of fluids to the smallest quantity. If a mixed diet causes discomfort, six or eight ounces of milk every three to four hours may be given with a little seltzer. The value of milk diet is best seen in cardiac disease associated with renal lesion. In the hyposystolic period of organic disease exercise is applicable. In asystolic conditions rest is important, and exercise should be given only in the form of careful massage. Properly regulated exercise promotes the flow of blood from the arterial to the venous system; it increases the flow of blood during and subsequent to contraction; it equalizes blood pressure, regulates cardiac action, and improves cardiac nutrition and metabolism. Dilatation of the cavities may subside rapidly under the effects of exercise. Cardiac asthma, painless angina, is often relieved by proper exercise. In a case of incompetent heart and rigid arteries, with high tension, it is of course very improper to advise exercise without first lowering the tension with drugs. The treatment of heart disease by baths is beneficial because it stimulates elimination and has had a direct tonic stimulant action on the nervous system.

The majority of instances of abnormal rhythm, palpitation, and precordial pains is due to reflex influence; the minority is of intrinsic cardiac action. Bradycardia, hemisystole and other abnormalities of rhythm are also of reflex, central or cardiac origin. The treatment of these includes diet and exercise and attention to the clinical indications made out in each case.

In chronic cardiac conditions the treatment should be tonic and stimulant. Tonic treatment is applicable to all periods of heart lesion, but particularly to the prevention of the hyposystolic condition. Stimulant treatment is directed to hyposystolic and commencing asystolic states.

Digitalis is a heart tonic through the better blood supply afforded by the more forcible and longer cardiac contraction, but in the dynamical failure of the muscle we find the best use for digitalis; exclusive of diet and exercise, the best heart tonics are strychnine, the iodides, arsenic and iron. Strychnine is a powerful cardiac and respiratory stimulant, particularly useful in impending failure of the right heart. The iodides, acting on the smaller vessels, are valuable heart tonics. Arsenic is valuable in cardiopathies associated with persistent anemia. Iron should always be given where there is deficient hemoglobin. The cumulative effects of digitalis are largely due to the indiscriminate use of the drug in cardiac enlargement. According to the nature of the case requiring vaso dilators, the iodides, nitrites, opium, or nitro-glycerine may be used. Strophanthus ranks next to digitalis in its stimulant action on the heart; it is most useful in mitral stenosis. In weak, enlarged

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hearts, associated with chronic nephritis, caffeine is a valuable medicament. If it produce disagreeable cerebral effects it should be discontinued.

Other cardiac stimulants are convalaria, adonis vernalis, cactus, nerium oleander and coronella scorpioides. The first two are the most useful. The pain, dropsy, and dyspnea of cardiac disease require attention. Pain is not frequent in chronic valvular disease, but may be present in marked aortic regurgitation. Spasmodic attacks of pain and dyspnea may occur in cardio muscular lesions associated with vascular changes. In senile degeneration of the heart there is often a pronounced oppression and distress about the heart due to high vascular tension. When not of reflex origin cardiac pain is relieved by vascular dilators. Morphine is the most potent. Nitro glycerine sometimes relieves pain where morphine fails.

Dyspnea may result from three causes: the cardiac lesions directly; the mechanical dyspnea of bronchitis, pulmonary apoplexy, edema, or hydrothorax; from auto-intoxication, due to renal inactivity. For this, morphine is one of the best remedies.

With dropsy extending upward from the lower extremities, the indication is to stimulate the kidneys. For this, calomel is the best drug. It should be given in 3 grain doses, t.i.d., until six doses are taken. To prevent its intestinal action a little opium may be given with it. Diuretin (theobromine-sodium and sodium salicylate) is an efficient diuretic. Milk is also a valuable diuretic in cardiac dropsies.—Jos. M. Patton, M.D., in *Chicago Clin. Rev.; Amer. Med.-Surg. Bulletin.*

Treatment of Pulmonary Consumption.—Perhaps the greatest living authority—Dr. Theodore Williams, of London—contribute to the *Birmingham Medical Review* a most valuable paper under this heading. It is so practically useful and interesting that we publish a considerable part of it.

Koch's brilliant discovery, while it has largely assisted diagnosis, cannot be said to have contributed much to the progress of treatment. It was the signal for an enthusiastic outburst of antiseptic or bacillicide measures. The unhappy phthisical patient was muzzled with antiseptic respirators, he was surrounded by antiseptic atmospheres, and he had to submit to what Daremberg terms "orgies of creosote and guaiacol." Antiseptics were injected hypodermically, antiseptics were administered per rectum, and all efforts short of destroying the patient were directed to slaughter the tubercle bacillus. But it must be admitted that it is one thing to arrest the spread or development of this bacillus in a test-tube or on a cultivation-plate, and another to attack it in the tissues of the delicate human body, where, except at a few exposed surfaces, such as the mouth or throat, it is out of reach of local manipulation. Many of the antiseptics used had not even the recommendation of having been proved to be fatal to the bacillus tuberculosis, but were tried on purely theoretical grounds. But, after all, supposing these means had succeeded in destroying the bacilli then present in the lungs, what was to prevent other tubercle bacilli in greater numbers from entering in and falling on the soil (proved to be vulnerable), then settling and multiplying, and thus rendering the last state of that patient worse than the first? There is nowadays much discussion on the contagious nature of phthisis, and the possibility of preventing much of the disease by notification and isolation; but while it is our duty to disinfect and destroy the sputum and other secretions of phthisical patients which have been proved to be sources of danger, any complete system of isolation would be quite impossible in so common a malady; and, moreover, as the evidence for its necessity is very weak indeed, it would be uncalled for and cruel.

The next event in the history of the treatment of phthisis was the employment of Koch's tuberculin injections, which turned out to be a most disastrous failure, but from which many wholesome lessons may be learnt, one of which is that any treatment which promotes not conservative, but destructive changes, as shown in the breaking down of the lung tissue and its appearance on a large scale in the sputum, cannot be otherwise than detrimental to the patient, as the area of infection, instead of being limited, is thereby considerably widened. Another lesson is that certain morbid poisons possess a distinctly elective affinity for certain organs, and appear to select old lesions in those organs. The quickness with which the lupus shots and tuberculous lesions in the lungs become the seat of active change is very remarkable, and the rapidity with which tuberculous masses of long standing break down and cavities are formed is even more so.

Now, it seems to me that all these specific modes of treatment ignore one great factor,—nay, the greatest factor of all,—viz., the resisting power of the organism to disease,—and it is to this that the physician should lend his aid and support; for, if his means are effectual, he can ward off disease, or, if a patient has already been attacked, he can limit its inroads and possibly arrest it altogether. A glance at the history of the treatment of phthisis will show that whatever success has been attained has been achieved by strengthening and fortifying treatment, whether by diet, climate, or medicines, and not by so-called specific treatment. Life in the pure air, judicious exercise, a light, nourishing dietary, and such aids as cod liver oil and tonics have effected more than all the bacillicide treatment put together. But these all act on the old principle of helping nature to help herself against her foes, and reducing the vulnerability of the patient to attack.

All experience teaches that a large quantity of oleaginous food, supplied under conditions which promote its absorption and assimilation, is the surest method, and among this class cod liver oil is easily pre-eminent, on account of its penetrative power and the ease with which, with pancreatic juice, it forms a rich emulsion capable of absorption. It is probably this which has caused cod-liver oil to do so much good in the treatment

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of phthisis; and when we reflect on the number of poor phthisical patients, as seen in the out-patient departments of hospitals, who enjoy no advantages of climate, whose surroundings are the reverse of sanitary, whose food is scanty, and whose trade or occupation is by no means salubrious, who yet hold their own by steadily persevering for months and years with cod-liver oil, it must be admitted that it does in some subtle way supply the requisite nourishment and augment the resisting force of the system; the diminution of the usual phthisical symptoms and the rapid gain of weight and strength confirm this.

With regard to substitutes for cod-liver oil—and they are legion—none of them are comparable; but the combination of the oil with the preparations of hypophosphites and arsenic has proved very useful. The introduction of a large amount of milk into the dietary is to be aimed at. If cow's milk, however, fails, ass's and goat's milk should be tried, which are more easily assimilated; or, if these are not available, by peptonizing or preparing cow's milk, it is rendered more easy of digestion. In some cases kumiss and kefir will, for a time at any rate, supply the patient with what is required. It is a curious fact that, although wasting is the leading feature of this affection, there are few patients who so readily gain weight as phthisical subjects when secured from over-exertion and supplied with appropriate food. At the Brompton Hospital is is no rare occurrence to see patients suffering from acute and advancing tuberculous disease, characterized by high afternoon temperature, nevertheless gain weight, owing to the large amount of suitable food taken. In phthisis gain of weight is by no means incompatible with progress of the disease; all it signifies is maintenance of appetite and the avoidance of exertion. But the most important factor in the system of treatment is pure air, and on its thorough application to the system of the patient most of our success depends. Sunshine and pure air are the best bacillicides. It must not be forgotten that it was the in-door occupations, like those ef milliners, dress makers, and tailors, formerly carried on in crowded, unventilated rooms, which furnished the largest number of cases of phthisis. On the other hand, the wild tribes of the desert, living in tents, like the Arabs, are exempt from the disease; but it was noted that when these were confined in French prisons they died of phthisis at a rate of fifty per cent.

In England, though there is a great deal of talk about the virtues of fresh air, and boasting of going out in all weathers, in the case of invalids the doctrine of MacCormac and Henry Bennet is not carried out as thoroughly as it ought to be. A leaf might with advantage be taken out of the book of some of our Continental friends, and we might fearlessly trust phthisical patients to a little more open air life than is at present done. Undoubtedly the treacherous climate of the British Isles, especially in winter and spring, is the great excuse. At most English health stations a wet or snowy day means confinement to the house, and generally to the fireside, for the whole twenty-four hours, the usual plea being the great tendency of phthisical patients to catch cold and contract fresh catarrh. When what goes on at Davos, St. Moritz, and Falkenstein is taken into consideration, the probability of catching cold, if ordinary precautions are taken, is very doubtful. At Davos and St. Moritz phthisical patients almost invariably sleep with open windows throughout the winter, when the thermometer not uncommonly registers — 4° F., or 36° F. below the freezing-point, care, of course, being taken to heat the room with stoves, to provide plenty of blankets and coverlets, and to see that the current of external air is not directed on the patient, but always first ascends to the ceiling. The universal testimony of medical men is to the effect that no harm and much good results from this practice. One effect is that patients accustom themselves to live in a lower temperature without noticing it. A talented literary friend of the writer's used to sit, sleep, and compose at Davos in a house of which the temperature did not exceed 40° F., while his healthy but unhappy guest was shivering at his side. A female patient at Davos, in winter, astonished the writer by undressing with the window open, snow lying deep on the ground at the time. He closed the window, which he was informed had been open for six weeks and without harm.

But it is to the practice carried on by day at the sanitaria at Davos, Leysin, and Falkenstein that attention is specially drawn. At each of these places there are covered terraces or long sheltered corridors open on one side to the air and protected from wind, where a large number of phthisical patients, at various stages of the disease, recline on couches for the greater part of the day in all weathers. These galleries are deep and lofty, sheltered from too much sun and from rain and snow by curtains. The patients lie on well cushioned basket-work or bamboo couches—like the Japanese ones used at the Brompton Hospital—for from seven to ten hours daily, only leaving them for meals or exercise. In the winter there is no heating apparatus, and warmth is kept up by fur clothing and abundant covering. At Falkenstein, on the slopes of the Tannus, about four hundred feet above sea-level, this seems to be sufficient, and during a recent visit Dr. Hess informed the writer that hot bottles were rarely called for; but at Davos, where the temperature falls to 15° F. below freezing-point in the shade, they are frequently needed. The galleries generally face south, and at Falkenstein, from their horse-shoe distribution, are complete sun traps on bright days; and here the invalids recline in all weathers, for they are not allowed to sit up, it being found more difficult to keep them warm in the sitting than in the recumbent position. Several of them told the writer that they felt cold at first, but soon got accustomed to it, and what they did dread were the white mists which prevail in autumn. Besides these terraces at Falkenstein, there are a number of pavilions in the park-like gardens, some holding two or four invalids, which ro-

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tate so as always to insure protection from wind and rain. The patients seem quite at their ease, and may be seen reading, writing, knitting, playing cards and games all day. They can keep warm even at Davos, as the author can testify when he visited Dr. Turban's sanitarium on a hard frosty day in January, 1892, and purposely shook hands with a number of invalids as they lay on their couches after sunset reading their books by lamplight. Their circulation seemed to be excellent. In these sanitaria this treatment is by no means confined to incipient cases or to those with limited lesions, but is ordered even to patients in a condition of great prostration and to well-marked pyrexial cases. Dettweiler holds that the open-air treatment is the best method of treating the pyrexia of phthisis, and his plan is as follows:

After keeping a case of this kind in bed for a week under diaphoretics and antipyretics, with cold-water applications and dry rubbings, if the pyrexia does not abate, the patient is placed under the open-air treatment, and this, according to Dettweiler, has the effect of gradually reducing the fever and improving appetite and strength. The open-air treatment has been largely in vogue in Germany since the Franco-German war, when the treatment of fever and of surgical cases in tents and in more or less open sheds was found to be so satisfactory, and most of the new German and Swiss hospitals have covered balconies or galleries adjoining the wards, where the patients can be wheeled, and where they can lie in the open air for most of the day. The same is done in some English hospitals if, as at St. Thomas' Hospital, the construction admits of it.

The advantages of this treatment for those suffering from phthisis are obvious, as it means the complete application of the finest antiseptic in the world—fresh air—to the lungs and system for most of the day; but the objections are two-fold. The recumbent position is not the best for expectoration, and where there are cavities and the power to expectorate is feeble there is some risk of fresh lung infection from reinhaled secretion and the formation of secondary cavities. This is met by adopting a position in which the head and shoulders are more or less raised, as is possible with most of the bamboo couches. Again, there are the want of exercise and the tendency to chilliness which such a practice involves. This is a point on which the writer differs from our German confreres, for, while they dwell on the importance of air, they do not attach sufficient importance to exercise, even in the initial lesions of phthisis. For the cases of consolidation or of excavation with pyrexia exercise is undesirable and a continuously recumbent position the best, but in the cases of limited apical lesions and limited cavities without fever it is desirable for the patient to take as much exercise as his strength will permit, in order to develop and extend the healthy portions of the lung and to increase the muscular power. This, however, need not prevent the patient from spending the resting times of the day in the recumbent position in the open air. Then the difficulty of carrying out this practice in London and Birmingham and other great cities is considerable, on account of the smoke and, in winter and autumn, of the fogs; but there is no reason why it should not be tried more fully at our health resorts, like Ventnor and Bournemouth, Torquay and Hastings. The south coast sanitaria of England should, as Dr. Hermann Weber suggests, have covered terraces or balconies in which patients might lie on couches, and in the numerous villa gardens of Bournemouth and Torquay convenient rotatory shelters, capable of being turned at will to keep out wind or rain, might be erected and the verandas be more utilized.

Cough should always be treated by promoting expectoration, one of the best forms of expectorant being the effervescing carbonate of ammonium draught night and morning, which will generally clear the bronchial passages for several hours. If there be a good deal of fruitless hacking before expectoration, causing annoyance to the patient, the addition of a few minims of dilute hydrocyanic acid and half a drachm of syrup of poppy or codeine will do no harm and considerably allay the reflex irritation. Where the cavities are large, or deep, or basic, and consequently require great expiratory effort to clear, combinations of sal volatile and spirit of ether with camphor water (as in the form of the mistura etheris et ammoniæ of the Brompton Hospital Pharmacopeia) answer admirably, while for old or feeble persons champagne will often serve the same purpose. But the most satisfactory way to reduce the cough of chronic phthisis is by counter irritation to the chest-wall; best by blistering. It will be found that relief will follow in proportion to the amount of serum drawn by vesication, and fly-blisters or acetum cantharidis, or the strong, but very efficient, liquor epispasticus answer the purpose. Night-sweats, when they are a mere flux from the vessels or lymphatics and not a relief of pyrexial processes, ought to be checked, and this can generally be done by arsenate of iron, one-sixtieth to one thirtieth grain at bedtime, or picrotoxin, one-sixteenth to one-thirtieth grain, or nitrate of pilocarpine, one twentieth grain, or the old-fashioned oxide of zinc in three grain to five-grain doses, which generally succeed and do no harm. Preparations of belladonna and atropine, though they are effectual controllers of night-sweats, are less satisfactory, because their continuance for a long period often induces dryness of throat and mouth, dilatation of the pupils, and disturbance of sight accommodation. The treatment of pyrexia depends very much on its cause. Where it accompanies tuberculization, it probably will subside of itself when the tuberculous process quiesces, and, even if persistent, will only prevail in the afternoon. An effervescing saline, with a few drops of tincture of aconite or a few grains of quinine, is all that is then wanted. But pyrexia accompanying acute excavation and tuberculization, is very troublesome and sometimes quite intractable. Antipyretics, of which there are any number, only give temporary relief, and often do harm by depressing the

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patient's constitutional powers and producing collapse. Williams has seen the temperature depressed from pyrexia to a subnormal reading by doses of antipyrin of phenacetin, but always with bad results, and after the use of the medicine has been omitted the temperature has risen as high as ever before.

The great object in the treatment of this form of pyrexia is to keep the patient quiet in a bed or lying on a couch, and, if possible, in the open air, *a la Dettweiler*, to feed him frequently, and to supply alcohol to repair tissue-waste, while administering only sufficient antipyretics to keep the temperature within moderate bounds Quinine in small doses in effervescence before the rise or during the rise of temperature will often suffice, or Heim's well-known pill twice a day. Any one who studies the phenomena of fever knows that temperature rise is only a small portion of the process, and that by lowering the chart we do not get rid of the factors of heat production or of the wear and tear of the tissues, and so our best line is rather to keep up strength and weight by a frequent supply of food. The diarrhea which accompanies tuberculous ulceration may be checked by sulphate of copper and opium if the ulcerative process be limited in extent, but if there is much ulceration, and it is the ileum and large intestine which are involved, injections are best. The enema opii of the British Pharmacopeia is excellent under these conditions; but he has seen a few of the most obstinate cases yield to large injections of linseed tea, which has a most soothing influence on the irritable ulcers.—*Therapeutic Gazette.*

Antipyrin in Large Doses in Epilepsy and Chorea.—McCall Anderson, in the *British Medical Journal*, advocates strongly the use of antipyrin in large doses in the treatment of epilepsy and chorea. He is opposed to the idea that antipyrin is a dangerous drug, and claims that very large doses can be given without the slightest difficulty, if only the initial dose be not too large and the large dose gradually reached, commencing, say, at ten grains three times, and raising one grain in the dose daily.

As examples of results obtained from the use of antipyrin in large doses, the following cases are given:

Case I.—Boy, aged 9 years, suffering from fits of two and a half years' duration. At the beginning of the illness he had fits very frequently, and after some months they gradually lessened until completely gone. He remained well for fifteen months, but seven months before admission they returned, commencing with one fit in twenty-four hours, and increasing until they amounted to forty and fifty in the day. The seizures were of the ordinary epileptic type, some followed by clonic spasm. Treatment began on December 20, and consisted of rest in bed, regulation of bowels, and the exhibition of antipyrin, beginning at five grains three times a day, and increasing the dose by one grain every day. On January 9 twenty-five grains thrice daily were reached, and this dose was continued until January 16, when the dose was reduced to twenty grains three times a day. From date of admission, December 12, until December 20, the daily average of fits was 16.5; from that till December 30, 13.2. On December 31 and January 1 there were eleven fits; on January 2 and 3 there were ten fits, and on January 4 three. They ceased until January 28, when there was one slight fit. For twelve days before the 28th the dose of antipyrin had been lowered. The antipyrin was gradually increased again to twenty-five grains thrice daily. No further fits. Patient discharged quite well on March 1. He continued taking antipyrin at home, and a letter from the father, dated March 12, stated that up to then he had had no recurrence.

Case II.—Boy, aged 12 years, admitted October 10, 1892. Suffering from second and severe attack of chorea. Has not improved as before, and has been under treatment at a dispensary since June. The movements are quite marked and incessant. He spills at least part of the water he attempts to swallow. There is slight difficulty in speech and a faint systolic murmur. The case was treated by antipyrin. On October 11 he received fifteen grains in three doses, and as the drug agreed well it was rapidly pushed. On the 13th he had thirty grains; on the 15th forty five grains; on the 17th sixty grains, and so on, until on November 14 he was taking fifty grains three times a day. He was about a fortnight under treatment before the symptoms began to abate, when he was getting thirty grains thrice daily. He left the infirmary perfectly well on November 25, the dose having been maintained at fifty grains three times a day until his dismissal. He was instructed to gradually diminish the dose and has since remained well.

Case III.—Female, aged 12 years. Admitted December 17, 1892, with a violent attack of chorea of a month's duration. This was the third attack. She has extremly violent movements. Can not walk or sit on a chair. It was necessary to lie her down in bed. On December 17 she took in all twelve grains of antipyrin; on the 18th she took ten grains thrice daily; on the 19th fifteen grains; on the 21st, twenty grains; on the 25th, twenty-five grains; January 6, thirty grains; January 12, thirty-five grains; January 16, forty-five grains three times a day. Drug not increased any further, as there was slight headache and sickness. Improvement was very rapid. She was able to sit by the fire on January 7. Movements still persisted, but they became very slight, and were confined now to the left leg and hand. After January 16 the drug was twice stopped for a day owing to sickness. On January 23 the dose was reduced to forty grains thrice daily, and Easton's syrup was given. The dose was then gradually reduced. Slight movement of right hand persisted for a time, but this also finally disappeared. She was dismissed quite well on March 7, 1894. Mr. Anderson sums up his experience in the following aphorisms:

1. Antipyrin is not the dangerous drug some observers have led us to suppose.

2. It may be given with safety in large doses, even

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in case of children, in most cases, although the initial dose must be small, and it must be slowly and cautiously increased.—*Canadian Practitioner.*

Treatment of Epithelioma of the Face with Lactic Acid.—In November, 1894, I was called by Dr. J. W. Drake, of Parkland, to see a patient, aged 65 years, who looks to be 85, the subject of chronic bronchitis, breathing very short, with a very weak and irregular heart, and a possible murmur. For five or six years he has had a small sore situated on the cheek. This sore went through the usual characteristics of a slow-growing epithelioma. Its growth was slow until about three months before I was called to see the case, when it began to develop very rapidly. I observed the case carefully for the purpose of reporting it. At the time I saw the patient the following conditions presented: There was an unusually thickened and indurated ulcer about the center of the cheek. The cavity was about the size of a silver dollar; fully two-thirds of this surface was occupied by an elevated, indurated, thickened, characteristic wall. The question asked by Dr. Drake was, What could be done to bring about a cure? A number of plans suggested themselves. Of course, under ordinary circumstances, direct excision with the knife would first demand attention; second, curetting under cocaine; third, the use of strong caustics—all of which I thought would be dangerous. I was really afraid to use chloroform, and afraid to use cocaine even in small quantity. About that time there occurred to me a paper I had read by the gentleman who introduced iodoform to the public, Von Mosetig Moorhof. Many of you will doubtless remember this paper. He is a very conservative surgeon, and one of the few who never says anything until he is certain of it. His publication, to which I refer, was on the use of lactic acid in cancers, a method which has never been very generally adopted. His paper was followed by a series of others, in which he made the remarkable statement that lactic acid had the power of attacking and destroying cancerous growths and not injuring the healthy tissues. I had used this treatment once, eight years ago, in an epithelioma occurring on the face of a very old lady, without any marked benefit; but it was not properly applied, because, after the second application, I went away and left the case in charge of an assistant who was probably not as thorough as was necessary to insure good results. At any rate, I suggested to Dr. Drake that we put this plan into effect: Dr. Drake was to faithfully carry out the treatment and see the patient once or twice per day, and I was to see him once per week. The treatment consisted of pure lactic acid and silicic acid made into a paste and applied. It was probably about fifty to sixty per cent strength. The first application was made, and I saw the patient again at the end of the week. He said that he suffered very little pain, much less than what he had been led to expect. We then increased the strength, making the paste more fluid, and applied it, which caused some pain, but at no time was the pain very severe. This paste was applid faithfully once per day. The surface of the sore commenced to granulate, the walls broke down like magic, and it almost seems like exaggeration when I say that the result was a perfectly clean cicatrix. The patient was discharged January 2, 1895, from all further observation, and there is a perfectly clean cicatrix about the size of a penny; it is smooth and somewhat reddish, of course, but the smoothness and non-elevation are characteristics to which I would call your particular attention.

I speak of the case because that method of application, so far as I know, has not been in practice here. Six or seven weeks from the first application the man has got entirely well. The result is absolutely perfect. I hope this will stimulate others to put the method into use, and I believe they will have similar results.—Dr. I. M. Bloom in *Jour. of Cutan. and Gen.-Urin. Diseases.*

The Dietetic Treatment of Chronic Bright's Disease.—The April number of the *Quarterly Medical Journal for Yorkshire and the Adjoining Counties* contains an article on this subject by Dr. W. Hale White, of Guy's Hospital. There are few, says the author, who would be inclined to dispute the statement that the dietetic treatment of chronic Bright's disease is a very important subject, and its importance has been enhanced of late years by the statment so often made that the ideal food for the patients is milk. According to Lepine, milk, is the ideal diet, for it replaces the albumin that the patient loses, all its nitrogen is absorbed and used, it does not irritate the kidneys, and it is diuretic and aids the elimination of the toxines. For the past few years the author has carefully examined the title of milk to be considered a perfect food in chronic Bright's disease.

Milk is said to diminish the amount of albumin, but, he says, this is not by any means always true, and he has seen many cases illustrating the falsity of the statement. It must be remembered that if milk did decrease the albuminuria, there is no proof that this is of any benefit to the patient. Patients who are very ill with chronic interstitial nephritis may lose only a few grains of albumin a day. This can not, of itself, says Dr. White, be of such importance as the absorption from the intestine of a very little more albuminous material would, if not lost in some excretion, quickly make up the deficiency. The majority of persons who pass albumin have not Bright's disease at all, but are suffering from heart disease, pyuria, specific fevers, etc. All these and other considerations indicate that even in a case of Bright's disease in which the loss of albumin is considerable this of itself is really not quite so important as is usually thought. If it was, restricting the diet to food containing less albumin than ordinary ought to be harmful to the patient, for not only would he be losing more albumin than when in health, but he would be taking in less. Then, too, it must be borne in mind that even in cases of Bright's disease where the change from a milk diet to meat increases the albuminuria, unless this in-

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crease is considerable, it is not so great as the increased absorption of albumin is, which is due to the fact that the meat diet contains more albumin than milk. The conclusion is, says the author, that the amount of albuminuria in chronic Bright's disease is of itself unimportant; that it is often more under a milk diet than under others; that even if it is more upon a meat than upon a milk diet, the increase is, nevertheless, usually more than compensated for by the increased absorption of albumin.

It is frequently urged, says Dr. White, that milk is easily digested, but his own experience is that often this is directly contrary to fact. He has noticed that patients suffering from chronic Bright's disease who are fed solely upon milk suffer from indigestion, that the milk by its mere bulk tends to dilate the stomach, and that it also causes constipation. With regard to its diuretic qualities, the author has observed this fact about it, but he has also frequently met with cases in which it was not diuretic. The theory that milk is less irritating to the kidneys than an ordinary diet, and that it contains fewer toxines, comes entirely, he says, from the study and not from the bedside.

Dr. White has convinced himself that none of the reasons urged in favor of a milk diet are valid, and he goes on to consider the effect of different diets upon the excretion of urea and on uremia; the effect on the general health of the patient; the effect on the circulation; and any exceptional cases for which milk is suitable. The author relates the histories of several cases with regard to the excretion of urea and to uremia, and the conclusions to be drawn from them, he thinks, are that the effect of diet upon the excretion of urea is most uncertain, for it does not follow that more proteid in the food means more urea excreted; if fact, the reverse is often true. Moreover, a milk diet is much more likely to induce uremia than an ordinary diet, and that, consequently, those who are constantly showing slight uremic symptoms should take the usual food of healthy persons.

As to the effect of diet on the general health, Dr. White says that he has watched his patients closely and has noticed that they always felt better on an ordinary diet than on one of milk; even if they are on a farinaceous diet, their health improves if meat is added to it. In the *Observations sur le Regime Lacte Absolu Dans l' Albuminurie* for 1893, says the author, Vergely protests most strongly against the use of milk in chronic Bright's disease, for it leads, he says, to weakness and causes digestive troubles that prevent all further treatment, and it leads also to a diminution of weight. In this opinion Dr. White fully agrees.

The next thing to consider, he says, is the effect of various diets upon the circulation, and from what has been said it is clear that a full ordinary diet containing meat should be expected to act as a cardiac stimulant, which is exactly what it does. Nothing is more striking, says Dr. White, than the alteration which takes place when a patient who has a feeble circulation from cardiac failure, bronchitis, or some other cause, and has been on a milk diet for some time, is put upon an ordinary diet. The pulse becomes fuller, the circulation improves, and the edema may even diminish. There can be no doubt whatever, he thinks, that in cases of chronic Bright's disease with a feeble circulation ordinary diet containing meat is an excellent thing, and the good that is done is due largely to the cardiac stimulant action of the extractives in the meat. For the same reason this is just the class of cases in which a little alcohol is beneficial, for it not only aids the circulation but improves the digestion.

With regard to a consideration of the cases for which a full diet is undesirable, says Dr. White, a diet composed largely of meat must be given with caution to patients in whom the pulse tension is high and the hypertrophied heart is acting powerfully, for in such cases the chief danger lies not in uremia, but in hemorrhage, especially cerebral. The extractives in the meat, acting as powerful cardiac stimulants, will increase the force of the heart, raise the blood pressure, and greatly add to the liability to cerebral hemorrhage. But we ought not, he says, unless the pulse tension is very high, to fly at once to the other extreme and give nothing but milk, for it must be remembered that the high-tension pulse is in itself probably evidence of a uremic condition, which, it has been seen, is rather accelerated by milk. For the most of such patients it will suffice to order small meals, one or two more in the day than usual; they should be advised also to take a little fish and fowl rather than beef and mutton—a little fish or bacon with a little toast and tea for breakfast, a sandwich or two at eleven o'clock, a few oysters for luncheon with bread and butter, chicken with vegetables, bread and a sweet for dinner, and a glass of milk the last thing at night, peptonized if the digestion requires it. Alcohol should be avoided altogether if the pulse tension is high, for its action as a cardiac stimulant tends to increase it.

An ordinary diet, says Dr. White, should be avoided when the patient is the subject of acute Bright's disease. We know, he says, that one variety of it is part of a specific fever, and the other variety is in its sudden onset, its pyrexia, the close resemblance of the pathological changes in the kidney to those in the lung in pneumonia, and in many other points, very like a specific fever, and, just as we have learned that pneumonia is a specific fever, so some day perhaps we shall discover that acute Bright's disease is a specific fever, and we know that during febrile processes the patients do best on a liquid diet. For this reason the author usually prescribes milk or a farinaceous diet for patients who are suffering with acute Bright's disease.—*New York Med. Jour.*

Chlorobrom as a Hypnotic in the Insane.—Dr. J. Percy Wade, of Catonsville, Md., contributes an article on this subject to the April number of the *American Journal of Insanity* in which he remarks that

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chlorobrom is a mixture of the simplest description, and contains thirty grains each of chloralamide and potassium bromide to an ounce of water. The solution was first used, he says, by Dr. Charteris in seasickness, for which it is said to be an excellent remedy, owing to its hypnotic action. The drug is said to have less action upon the heart and upon the blood vessels than chloral, and, although depressing to the circulation and the heart, is probably less so than the bromides or other allied drugs. It is less disagreeable to take than paral dehyde, which is often followed by lassitude, headache, or sickness in the morning. Chlorobrom, on the other hand, is not very disagreeable to take, and it leaves no ill effects.

Dr. Keay, says the author, has used the drug with good results, and he recommends it highly in melancholia, especially active melancholia or brain exhaustion from overwork, and for worried business men, when insemnia is the most serious symptom to combat. In mania, general paresis, and the excitement of epilepsy he has found the drug not suitable, and prefers sulphonal or trional. He administers an ounce of the solution an hour before bedtime, and if the excitement is great he increases the dose from an ounce and a half to two ounces with perfect safety.

The time required for the drug to act, says Dr. Wade, is probably longer than for paraldehyde or sulphonal, for it takes, in mania, about three quarters of an hour to produce sleep, and in melancholia an hour. The sleep is quiet and peaceful, lasting, on an average, five hours and a half. In one case the patient, who was noisy and refused to remain in bed, was given a dose of paraldehyde, but it was immediatey vomited. After the vomiting had subsided an ounce of chlorobrom was given and the patient became quiet in fifteen minutes and fell asleep in forty-five minutes, and remained so for four hours. In another case of recurrent mania, when the patient was quarrelsome and there was inability to sleep, chlorobrom was given with excellent results, and it apparently reduced the length of the attack, the former attack having lasted for four months, while the latter, under the influence of the chlorobrom, lasted for six weeks only.

Dr. Wade's experience with the drug in simple and in active melancholia confirms Dr. Keay's report; but in acute mania, notwithstanding Dr. Keay's statement, he has found that the drug produced sleep, although it took somewhat longer to act; and the sleep, he says, was of refreshing as that produced by other hypnotics. It was administered ninety-six times to sixteen patients, including three with acute mania, three with melancholia, seven with dementia, and one each with active melancholia, epilepsy, and periodic mania. The dose was an ounce, as a rule, and was found to be sufficient to produce sleep in most cases.

Dr. Wade says that he has not been able to test the action of the drug in general paresis, and that there seems to be some doubt as to its action in that disease. He thinks it is justifiable to state, as Dr. Keay has done, that chlorobrom is a safe and reliable addition to the small list of hypnotics; that it is most favorable in melancholia, especially of the milder type, and that in acute mania its action is fully as reliable and lasting as that of any other hypnotic we possess.—*New York Medical Journal.*

SURGERY.

Strangulated Hernia.—An interesting study of thirty nine cases of true strangulated hernia is described by De Garmo of New York in *Annals af Surgery*, April, 1895. Of these thirty-nine cases twenty-six were males and thirteen females whose ages ranged from seven months to eighty years of age. Twenty-nine had inguinal, eight had femoral and two had umbilical hernia. In twenty-two cases the hernias were reduced without operation. Ether was given seventeen times, chloroform six, while two were operated upon after injecting in the vicinity of the tumor with a 4 per cent soultion of cocaine. Of the entire number three died.

The author advises that you assure your patient that you are not going to add to his torture and confirm this in his mind by handling the tumor with the greatest gentleness. By this you will secure his co-operation instead of unconscious resistance. Place the patient on a table with the hips well elevated instead of working over a soft and yielding bed. An ordinary kitchen table, with the legs at one end elevated 6 or 7 inches answers every purpose.

When the patient is in place, first gently crowd the entire abdominal contents away from the lower abdomen towards the chest, then work the fingers of one hand around the neck of the tumor where it issues from the abdomen, holding its bulk in the palm of the hand, if possible, and, instead of trying to push the tumor back into the abdomen, try to draw it further down. Now with the other hand, grasp the canal with its contents (if inguinal) gently but firmly between the thumb and fingers, and while making traction and compression with the hand that is holding the tumor, manipulate the canal with a "kneading" motion. This can be done without adding to the patient's pain to any extent, and it will succeed when more rude handling fails.

In the method suggested, by tractions you lengthen out the mass that is blockading the canal favoring the effect which is afterwards produced by compression, *i.e.*, a partial emptying of enlarged bood vessels and the displacement of imprisoned gases and fluids.

The author further believes that internal remedies are worse than useless and that the hypodermic syringe is to be used for the palliation of suffering only. The author believes the use of hot water to be of the utmost importance and has noted in many instances the almost magical effects in rapidly re-establishing the circulation and restoring the normal color.

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The treatment is summarized in the following conclusions:

1. Prompt operation saves complications and life.
2. Infants seldom require operation.
3. Medicines and external applications are dangerous as their use causes delay.
4. Operations done early are neither difficult nor dangerous.
5. Rough handling is more dangerous than an operation.
6. Morphia masks symptoms, but does not stop destructive changes.
7. Local symptoms are misleading.
8. Hot water saves resection, or furnishes prompt evidence of its necessity.
9. Operate rather than attempt the reduction of a hernia actually strangulated for twenty-four hours.
10. Open the internal ring in every instance.
11. Always draw the bowel down far enough to examine the actual point of constriction.
12. It is not considered good practice to give cathartics after strangulation and the return of suspicious bowel.—*Canada Practitioner.*

Prostatic Abscesses.—Casper, at the meeting of the "Hufeland'sche Gesellschaft," November 22, 1894, (*All. Medicin. Central Zeitung*) presented the following treatment:

The presence of pus, fever and retention are indications for immediate interference. The fact that occasionally spontaneous retrogression and absorption occurs, as shown in a case of the author's that refused operation, does not militate against the general rule.

Three methods are available: the abscess can be opened from the rectum; or from the perineum; or, following Dittel, the intestines may be separated from the gland by a pre rectal incision, and the prostate then incised. Our choice depends on the nature of the case. If suppuration is abundant and the abscess prominent, incision through the rectum or perineum is indicated. Casper did the former operations eighteen and the latter three times. In the latter cases there was a large perineal projection, the skin over which was reddened and thinned.

To reach the deeper seated abscesses from the perineum would mean the performance of a median section, and this is the less justifiable as there is the greatest danger of dividing the ejaculatory ducts and causing sterility.

If the tumor projects mostly into the rectum the opening should be made from the cavity. Dittel's operation is suitable for the remaining cases, in which neither perineum nor rectum shows a marked fluctuating tumor.

The objections that have been made to the rectal operation are that it can not be done antiseptically, and that there is danger of hemorrhage, pyemia and fistula formation. These may be avoided by the following measures· The narcosis must be deep, to overcome, as far as possible, sphincteric resistance. The trivalve speculum gives a suitable and well exposed operation field. After thoroughly cleansing and irrigating the latter, the rectum above is thoroughly closed with an iodoform gauze tampon. An incision is then made down into the gland, and by bilateral pressure the pus that it contains is squeezed out. A drainage tube is then put in, which projects out of the anus. The rectum is irrigated three or four times daily. In three or four days the drainage tube is removed and the wound allowed to heal.

Hemorrhage is not to be feared, as the operator has an open field. Fever and other complications occurred in none of the writer's cases. The fistula heals spontaneously, or can easily be closed by operative procedure. Pyemia may be excluded, since after the lapse of several days infection can hardly occur. Before the operation laxatives are to be given, and after it opium.

Little can be said of the treatment of peripostatic abscesses and phlebitis paraprostatica. The former calls for rectal incision; the latter leads to pyemia, and must be treated in the usual symptomatic and fruitless way.—*International Journal of Surgery.*

Hemorrhage Following Tonsillotomy.—Price-Brown (*Canadian Practitioner*) reports in detail three cases coming under the above title. He states that he has never met with hemorrhage of a severe character, either primary or secondary. Moreover, the old idea of the possibility of wounding the internal carotid artery by tonsillotomy has been demonstrated by Heryng and Linhart to be incorrect, the vessel being situated behind the posterior pillar instead of external to the tonsil. He employs Mathieu's tonsillotomes, using the larger or smaller instruments as the size of the growth would indicate. He presses the instrument well into position to insure a sufficient hold for the needles.

In summing up the full number of recorded cases, the author has been able to find, including his own, about sixty four. Of these, three were children, aged respectively six, eight and ten years. In two of them hemorrhage did not occur until four and four and a half days after operation. In the other, although commencing early, it did not cease until five days after excision of the tonsil.

In sixty-one cases, all adults, with three or four exceptions, the hemorrhage occurred, at the outside, within two days after tonsillotomy. In the exceptional cases the hemorrhage could be traced individually to over-exertion of one form or another.

Granting that the surgeon can have a judicious oversight over his cases, the lesson taught seems to be:

That tonsillotomy is a safe operation whenever necessary, irrespective of the age of the patient. That in young children the period requiring the greatest care after operation is between the third and the sixth days. That in adults, after operation, the patient should be kept under observation for from thirty-six to forty-

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eight hours, subsequent to which time a warning against possible contingencies may be all that will be required.

Surgical Treatment of Primary Tuberculosis of the Genito Urinary Organs.—Watson (*Boston Med. Surg. Jour.*) holds that in these cases the outlook is not hopeful for surgical interference. The local treatment of the bladder when it is the seat of the tuberculous process is for the most part unavailing. Dilatation of the female urethra sometimes gives short periods of relief, but often fails to do so. Deep urethral injections are injurious. Long-continued drainage through the perineum fails to relieve. Suprapubic cystotomy for relief of vesical tenesmus is markedly successful, especially when supplemented by applications. Curetting and the application of iodoform to the ulcerated mucous surface of the bladder afforded very considerable relief.

Guyon has reported two cases of what he considered to be primary tuberculosis of the bladder, which he treated by suprapubic cystotomy and by burning the ulcerated surfaces with the actual cautery. One of these he reported as cured, the bacilli having disappeared from the urine, and the patient being freed from all symptoms one year later. The second patient did well, but the bacilli did not disappear.

Facklam collected one hundred and eight cases of tuberculosis of the kidney, in twenty of which nephrotomy was performed and in the remainder nephrectomy. Thirty-eight cases out of seventy-two were diagnosed correctly before operation. The following conculsions are drawn from a study of the operations and their results. The mortality attending the operation of twenty nephrotomies is about sixty per cent. Of the eight patients who recovered, four only are claimed as cures. This is well established in but a single case. Five had had the disease several years previouly. Two of them developed acute miliary tuberculosis immediately after the operation. One died of uremia, one died of acute septicemia, and in the remainder the disease was far advanced or had involed other organs besides the kidney.

From this evidence the author concudes: "Thus far the results of nephrotomies in cases of renal tuberculosis are not favorable."

In sixteen additional cases in which nephrotomy had been performed without improving the patient's condition, nephrectomy was done, resulting, in ten of them, in very marked improvement.

Nephrectomy was performed in eighty eight cases, with a mortality of twenty-eight per cent. In thirteen the operation was performed through an abdominal incision, with four deaths (about thirty per cent mortality). In seventy-five the operation was extraperitoneal, twenty-one deaths resulting (or about twenty-eight per cent mortality); but of these latter, sixteen can be said not to have died as a direct result of the operation, whereas the four deaths resulting from the abdominal operation were all due to shock, and followed immediately upon the operation.

Of the cases which recovered from the operation, sixty-two (or seventy per cent) are reported as wholly cured or greatly relieved, but of these only fourteen had been under observation for over one year after the operation. Of these fourteen cases, five are entirely cured, so far as can be seen; the rest are not wholly free from evidences of the disease.

Vigneron's statistics correspond very closely with those of Facklam. He is opposed to early surgical interference in renal tuberculosis. Nephrotomy gives relief in many cases, and exceptionally accomplishes radical cure. This operation is indicated when the patient is suffering, is losing ground, and when both kidneys are affected. It is essential freely to open all pus cavities, and to remove so far as possible all cheesy masses, to drain freely, and to suture the edges of the renal wound to the lumbar incision, so as to allow the interior of the kidney to be easily cleansed and dressed. If these steps are not taken the operation is useless.

The mortality in abdominal nephrectomies he gives as very nearly twenty-seven per cent. In lumbar nephrectomies between thirty-five and forty per cent. He advises secondary rather than primary nephrectomy, since this operaption shows a decided decrease in mortality. The best time to choose is a few weeks after nephrotomy, as soon as the patient's general condition has improved. Nephrectomy should be considered only in those cases in which the disease is unilateral. Renal palpation and the endoscope will in most cases make a decision perfectly possible.—*Therapeutic Gazette.*

Surgery of the Maxillary Sinus, and Its Progress During the Past Ten Years.—Since rhinoscopy has made the antrum directly accessible through the nasal cavity the pathology of the sinus has been radically changed; not merely transformed, but enlarged to unforeseen limits; a host of rhinorrheas, which were formerly regarded as chronic coryzas, are now traced to their true origin within the sinus. An entirely modern form of intra-maxillary abscess has been created, one which is recognized and characterized by the presence of pus in the nasal fossæ.

Although for many years the empyema of the antrum of Highmore has been recognized, the difference between the two is one of degree and not of kind, and the symptoms of the milder form may merge rapidly into those of the classical disease under the existence of certain conditions. The two names, "open empyema" and "closed empyema," are now commonly used to express the difference beteen the two.

Before the use of the rhinoscopic mirror the diagnosis was based upon the external symptoms alone, but now the suppurative process within the cavity are found to be much more common than was once believed.

The modern form of maxillary abscess is much more

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difficult to recognize. Its diagnosis does not rest upon one symptom alone—nasal suppuration. Unilaterality, intermittence, fetor are helps, but are untrustworthy; pus must actually be discovered within the antrum. This may be done, after the method of Heryng, by transillumination, or by catheterization of the natural outlet or exploratory puncture, lavage, or aspiration.

As the innumerable variety of operative proceedings for the relief of the old form of Highmore's empyema liternally did not leave a place for a new operation, the treatment of suppuration within the antrum has not made the progress which pathogenesis and diagnosis have. When the operator is thoroughly familiar with intranasal technique, lavage through the natural meatus is probably to be preferred. When trephining must be done the alveolus of a molar tooth is the better site. The opening through the canine fossa should be reserved to use in cases which require tamponnade and curetting.—Dr. Range in *French Congress of Surgery; Annals of Surgery*

Fibrosis of Thyroid, Partial Thyroidectomy, Tracheotomy, and Dilatation of the Stenosed Trachea.—Fibrosis or fibrous degenera sion of the thyroid gland following upon a primary enlargement must be a very rare disease. No case of the kind appears to have been put on record. Ziegler alone simply mentions the occurrence of the disease. The clinical course of the case before and after operations, as well as the microscopical appearances of the portion removed, exclude fibrosarcoma such as described by Bowlby.

A pale, thin domestic servant was born and has al ways lived in London. More than seven years ago her parents noticed a soft swelling in the region of the thyroid which, after existing for some time, gradually got smaller and harder. With this decrease in size difficulty in breathing came on.

The mother has had for years a soft thyroid tumor situated at the junction between the isthmus and the right lobe. This is either an adenoma or a flaccid cyst.

When the patient was first seen the thyroid gland ap peared to be normal, both in shape and size, but it was of stony hardness. The pulse was 130 or 140 per minute without exophthalmos. Stridor was heard over the whole chest, being loudest in the trachea at the level of the isthmus. Over the apices of the lungs the sounds were not unlike those commonly associated with phthisis. She exhibited, however, no other signs of this disease.

Whilst under observation the stridor gradually increased, and cyanosis became marked; the pulse never fell below 130.

The duration of the affection and the decrease in size of the thyroid from its previous enlarged state led me to make a diagnosis of calcification of a formerly enlarged bronchocele.

On April 11, 1894, under slight chloroform anesthesia, a median incision was made down to the isthmus. The texture of the isthmus when cut into was that of the hardest fibrous tumor, but there was no calcification. In spite of careful attempts, no line of demarcation could be made out between the isthmus and the trachea; therefore the isthmus and the adjacent part of each lateral lobe were shaved off from the trachea, leaving a portion of the gland on either side about as large as the end point of the thumb. The trachea thus exposed felt like a soft tube and was sucked in and blown out by inspiration and expiration. The cartilaginous rings had softened or disappeared. As the breathing was none the better for the removal of the isthmus, the trachea was opened immediately below the cricoid cartilage. The rings were at this spot normal, but on retracting the sides of the incised trachea the lumen was seen to be narrowed to a chink. The incision was therefore extended downward through the part of the trachea which had been in contact with the thyroid until cartilaginous rings were again met with. The mucous membrane appeared normal, being merely thrown into folds in the narrow part. A Parker's silver tracheotomy tube was inserted, and the breathing became free. After the patient had worn the tube for a fortnight she was gradually able to discard it, so that at the end of a month from the operation the wound in the neck had entirely closed.

The patient was shown at a meeting of the Laryngological Society of London on December 12—*i. e.*, ten months after—in good health, breathing without trouble, a faint stridor only being audible in the trachea. The remainder of the thyroid on either side of the trachea could be felt to be very hard and, perhaps, at this time a little smaller than immediately after the eperation. Certainly there had been no increase. The pulse-rate was still 120 per minute.

On examination of the tissue removed, a part showed thyroid alveoli in no way dilated and containing normal colloid matter, but the alveoli were separated from one another by an increased amount of fibrous tissue. In the rest of the material removed all glandular structures had been replaced by dense fibrous tissue, without any sign of sarcomatous elements or of cysts, but showing vessels with well-marked walls.

Between these two parts the thyroid alveoli were smaller in size and filled with epithelial cells, or clumps of epithelial cells surrounded by small cells marked the position of a former alveolus, or, lastly, groups of small round cells alone were visible. The fibrosis seemed to have spread inward from the capsule of the gland.

After the longitudinal division of the stenosed portion of the trachea the dilatation may be expected to persist to a large extent, if the behavior of other strictured tubes forms any analogy. The unaltered condition of the mucous membrane must importantly favor the maintenance of the dilatation. The rapid pulse would seem to date from the time when an enlarged bronchocele was present. It is remarkable that it should remain rapid when so much of the gland has been put out of action. No myxedematous symptoms

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have supervened, for some active thyroid tissue is still left, and the stony hardness of the gland differs widely from the soft withered gland occurring with myxodema. The most and important surgical feature was the fact that the trachea was intimately included in the disease, whereas the clinical and microscopical appearances are clearly opposed to malignancy.—Walter Spencer, M.D., in *Annals of Surgery*.

Ligature of the Carotid Artery for Cerebral Hemorrhage.—It will be remembered that some time ago, in a series of experiments on monkeys, Mr. Horsley and Mr. Spencer found that hemorrhage in the basal ganglia could be controlled by ligature of the common carotid artery, and they suggested the ligature of the artery was a procedure which might be adopted in cases of ingravescent apoplexy. In a recent number of the *American Journal of Nervous and Mental Diseases* Dr. Dercum and Dr Keen, of Philadelphia, relate two cases which have a considerable amount of interest with reference to this point. The first was that of a man aged fifty, who on the morning of February 11 had experienced a slight weakness of the left arm. In the evening of the same day there was also noticed some weakness of the left leg. Medical advice was now sought, and wet cups were applied to the back of the neck, a purgative was administered, and ergot and bromides were given. On the following day the one-sided weakness was slightly greater, on the day after it increased, and was apparently becoming steadily worse at the close of the fourth day from the onset, when there was complete motor palsy of the left arm, decided weakness of the corresponding leg, and paralysis of the lower half of the left side of the face. There was no affection of sensation, and no headache, only a dull feeling in the head, and slight giddiness, without any obscuration of intelligence. The urine contained a small quantity of albumin. It was thought that the condition was most likely one of ingravescent apoplexy, and Dr. Keen was asked to ligature the common carotid artery on the right side. This was done, cocaine only being used locally. No increase of the paralysis was observed after this, and two days later an appreciable improvement had taken place, the patient being now able to move his left hand and fingers. Improvement continued, and the condition at the end of two months showed a slight spastic condition of the left leg, with drooping of the left side of the face and weakness of the left hand and arm. There was no anesthesia, and the mental condition was in no way impaired. The second case was that of a man attacked at two o'clock one afternoon with weakness of the left arm. The same evening the weakness was greater, and had involved the leg and face on the same side. Ingravescent apoplexy was diagnosed, and ligature of the common carotid artery decided upon, but before it could be carried out it was late at night, and the paralysis had deepened and unconsciousness had supervened. The operation failed to relieve the patient, however, and he died a few hours later. The publication of these cases will direct attention anew to a subject of much practical interest and importance. It is obvious that, in reference to any operative procedure in such cases as those here related, the great question is one of diagnosis. However likely the diagnosis of increasing hemorrhage was in the first case, even the success which followed the operation does not absolutely settle the question; and it cannot be asserted that the success was more than a subsequent fact. It is unfortunate that no necropsy was obtained in the second case.—*Lancet*.

OBSTETRICS AND GYNECOLOGY.

Vaginal Hysterectomy for Cancer of the Uterus.—A very able paper upon the whole subject of cancer of the uterus in all its varieties and in all situations was lately read at the Liverpool Medical Institution, by H. Briggs, M.B., F.R.C.S. (*Liverpool Medico-Chir. Jour.*).

A tabulated report of nineteen cases of uterine cancer treated by vaginal hysterectomy was made the basis of the communication. His observations have led him to conclude that cancerous growth of the cervix is the most common form of malignant disease of the uterus. "It originates in the epithelial structures between the internal os and the transitional epithelial margin, situate in the normal cervix just within the external os. It is well known that cancer, commencing within the cervix tends to invade the tissues in a horizontal direction and to spread within the parametric cellular tissue. It has been alleged that the body of the uterus above the internal os more frequently escapes the extension of the disease. The path of growth has been described as outward into the cellular tissues, rather than upward.

"Primary cancer of the portio vaginalis spreads superficially over the cervix and vaginal walls and does not require more than a partial removal of the uterus."

It would appear if the above statements be true that partial and total extirpations of the uterus present equal prospects in the treatment of cervical cancer. A supra-vaginal amputation of the cervix and a vaginal hysterectomy are equalized; the one is as radical as the other in dealing with the primary growth, they both remove it and the one is as ineffective as the other in extirpating the surrounding cellular tissue. Parametric cellular tissue, if infected, is left behind in either operation. The advocates of supra-vaginal amputation have admitted that recurrence in the stump of the uterus has been observed, and that, after such amputation, it has been necessary occasionally to excise a cone-shaped piece of the body of the uterus containing disease. The cone shaped piece has been removed by tunnelling the body of the uterus under the peritoneum. * * *

"These pathological and clinical experiences prove the difficulty, the uncertainty, if not the impossibility,

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of mapping out a cancerous area in the uterus, either before or during the operation."

It has been the author's custom "where there was any doubt as to the upward extent of the malignant infiltration of the cervix, to commence the operation as for a supra vaginal amputation and when the whole of the cervix in front had been freed from its connections to take care to ascertain, by complete palpation of the loosened cervix, if the upper limits of the induration were below the internal os, before deciding to extirpate the whole uterus. The surgeon need respect no particular or set operation; his aim is to get safely beyond the induration in the uterus. There can be no real advantage to the patient in possessing a mere remnant of the body of that organ. When the cancerous growth can be thoroughly excised by supra vaginal amputation there are few operaters who would prefer to remove the whole uterus." * * *

"It must be admitted by all that the real drawback lies, outside the uterus, in the irremovable parametric cellular tissue, and it is common to both partial and total operations. Early infiltration of the cellular tissue can not be distinguished either before or during the operation. Coarse tracks of infected cellular tissue can be recognized, and they ordinarily contra indicate operation." * * *

"What is the extent of the relief afforded by vaginal hysterectomy as a palliative treatment? Radical cures seem to have been but rarely established by the operation, undertaken in cases considered to be suitable for it (in the cases tabulated); that is where the coarse lesions could be thoroughly extirpated. If the results of the operation be mainly palliative and not curative, the symptom of a copious hemorrhage and fetid discharge, not controlled by other means, perhaps warrants the operation. A suppression of the local symptoms has been found to influence beneficially the general health and with it the mental comfort of the patient. The one change seems to have produced the other with certainty. Disappointment ought to be expected, therefore, when the local symptoms are slight, as they often are even with extensive disease, or when a urinary or fecal fistula is established by the operation."—*Canada Practitioner.*

The Mechanical Treatment of Anasarca.—Long clinical experience, comprising a large number of patients, has convinced Prof. Leichtenstern, Head Physician to the Municipal Hospital of Cologne, that the best mechanical treatment of anasarca consists in making in each foot of the patient a single incision of sufficient depth and extent. This procedure is now employed to the exclusion of all others in Prof. Leichtenstern's wards. His assistant, Dr. H. Schurz, describes it as follows:

The patient is placed in an armchair, with the feet on a small stool in a foot-bath. The legs of the patient, as well as the stool and foot-bath, must have been previously washed and asepticised. The incision is made either below the external malleolus, near the plantar border, or on the dorsum of the foot, comprising the whole thickness of the skin for about 3 centimetres in length. After the slight hemorrhage resulting from the incision has been arrested, the margin of the wound is coated with vaseline, after which it is covered with a small compress of iodoform gauze, steeped in a perchloride of mercury solution, and a thin cotton wood dressing is applied to the leg.

The patient is to remain in a sitting posture during the day, and also during the night, in a chair specially arranged for this purpose. The legs of the patient are slightly raised so as to rest on an inclined plane, and are wrapped in a rubber sheet, forming a drain through which the serous liquid flows into the recipient at his feet. A few drops of carbolic acid are poured into the latter, in order to prevent decomposition of the liquid.

If a suitable chair is not obtainable, the patient remains in his bed at night, and possibly also during the day, in which case the bed should be so arranged as to form an inclined plane, the legs being wrapped as before in an impermeable material, communicating with a vessel destined to receive the serous fluid.

The dressing is renewed once daily. If the incisions are found to be closed up by fibrinous clots, or if their margins are glued together, they should be separated and the wound carefully washed. To cause the wounds to close permanently, it is only necessary to apply a moderately tight dressing. Cicatrization is usually complete at the end of a week. In case the wounds are widely open, it may be necessary to place a few sutures to hold the edges together.

According to Dr. Schurz, the flow of serous fluid under this treatment is four times as abundant as when recourse is had to one of the usual methods of drainage recommended for the relief of general dropsy.

Painful excoriations of the skin and eczematous eruptions have never been noticed in any of the patients treated by this method.—*Canada Practitioner.*

Premature Separation of the Normally Placed Placenta.—Von Weiss (*Archiv. f. Gyn.*, 46 Band, 2 Heft.) says by way of preface that his studies comprise only cases of nearly complete separation of the placenta, occurring immediately before or during the first stage of labor. The women were almost exclusively multiparæ. In all the attack was either traceable to no cause or was the result of only slight external violence. Probably the attachment of the placenta was primarily insecure.

The symptoms of hemorrhage into the uterus are rapidly growing pain with a sense of extreme tension in the abdomen, profound collapse, pallor, pulse rapid and almost imperceptible, gaping, sighing, dyspnea and great restlessness. The abdomen as a rule is greatly distended, the uterus tense, exquisitely sensitive to the touch, and reaching nearly or quite to the ensiform. Uterine contractions either cease altogether or are exceedingly infrequent.

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Allusion is made to the classical paper of Goodell, the principal statistical data of which, though familiar to many readers, are perhaps worthy of repetition here. Of the one hundred and six cases collated by Goodell, in eighty the attack came on during the eighth or ninth month of pregnancy. In thirty-seven cases the cause was severe muscular exertion, falls, excessive coition, or violent emotional disturbance. In three cases the cause assigned was rectal tenesmus, in one coughing. There was a hemorrhagic diathesis in three, extreme anasarca in one, nephritis in one Fifty-four of the mothers and one hundred and seven of the children were lost. Forty-one of the mothers died before the rupture of the membranes.

The results of treatment by different methods were as follows:

In 43 cases treated expectantly 32 died.

In 50 cases in which interference was practiced 15 died.

In 24 cases of rupture of the membranes 6 died.

In 9 cases delivered by forceps 2 died.

In 14 cases delivered by version 5 died.

In 3 cases by embryulcia 3 died.

Post-mortem Cesarean section was done in seven cases. Two of the children were delivered alive, one of which survived.

With reference to etiology the author observes that undue importance has been attached to external violence. Since Winter directed attention to the relation between premature separation and nephritis his views have been confirmed by a number of observers, notably Fehling, Munchmeyer, Veit, Henry, Beck, Rousseau, Dumaroet and Schauta. Endometritis and chronic or subacute pathological changes in the decidua are recognized results of kidney disease and these in turn lead to placental infarcts, to the death of the fetus and to premature separation of the placenta. These views are borne out by the occurrence of hydrorrhea in the early months of pregnancy with inflammatory thickening of the decidua, the frequent presence of placenta marginata, etc.

On the other hand Ruge, Meyer and Gustav Braun have observed causes of premature separation without nepphritis. Benike, Wyder and Haeberlin have met with premature separation of the normally placed placenta in Basedow's disease. Lohlein reported a case due to croupous hemorrhagic endometritis. Veit says he has in two recent cases convinced himself of the existence of inflammatory disease.

Meyer could in none of his four cases demonstrate the presence of albuminuria. He says, "unmistakably there exist the changes which belong to endometritis decidualis; very often they can be demonstrated by the microscope." Baker speaks of finding degeneration of the placenta and old coagula.

Of the eight cases reported by the author five were in Prof. Gustav Braun's clinic; three of them occurred under his own observation. Two occurred in Prof. Schauta's clinic and one in this own practice. Five of the eight were complicated with nephritis, three were perfectly free from kidney affection. In no case was there syphilis.

The author thinks his observations confirm the fact that premature separation of the normal placenta in nephritis may occur from the interposition of exudative and degenerative changes in the decidua.

In two of his cases there were inflammatory changes, which affected principally the uterus and thus constituted the main factor in the premature placental separation. This result of genuine myometritis in pregnancy is nowhere alluded to and inflammatory processes of the uterine structure are only superficially mentioned in the text books.

The fact that in Goodell's cases the women were almost exclusively multiparæ proves the important role which belongs to inflammatory disease or perhaps also to degenerative changes in the muscular structures. In the author's two cases the presence of marked disease of the uterine structure as demonstrated by the microscope explains the post-partum inertia uteri which in one case terminated fatally and in the other necessitated a Porro operation. Muscles so highly infiltrated can obviously contract only imperfectly. Cesarean section in cases of severe premature separation of the normally placed placenta has been proposed by v. Graefe, Beck, and others, in preference to accouchement force, but so far as I know not yet performed on this indication. Our observations teach us that in individual cases it may be necessary after delivery in consequence of uncontrollable hemorrhage. In the repeatedly observed cases of bleeding from inertia uteri after labor which yields to none of the usual means, not even to the uterine tamponade, an examination of the uterine parenchyma will perhaps reveal similar lesions.

Such hemorrhages after labor are also observed in nephritis. Here belongs one of our cases, also those of Kaltenbach and Grapow, probably caused by the decidual lesions together with those in the muscularis to which we have alluded, perhaps also by the pathologic condition of the blood, which in Kaltenbach's case the autopsy revealed, resulting in the entire absence of any thrombus formation in the uterine veins.

In any case such observations as are here given tend to enlarge the indications for Cesarean section, instead of accouchement force, for bad cases of premature placental separation with incomplete canalization of the passages.—*Brooklyn Medical Journal.*

Vote of the German Congress of Internal Medicine Upon the Diphtheria Antitoxin.—At the conclusion of the discussion before the above Congress on the value of the serum therapy of diphtheria the following resolution was adopted: "That this meeting is of opinion that no harm had been done to the patients by the antitoxin treatment, that the majority of observers had seen good results, and that the experiments concerning immunization were not yet sufficient and should be continued.

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NOTES AND ITEMS

The Hunger of the World.—Mr. E. G. Ravenstein, the eminent English geographer and statistician, has made some calculations to find when the earth will be unable to find nourishment for its population and they will be forced to cannibalism or starvation. According to him when the number exceeds 5,994,000,000, or in round numbers, 6,000,000,000, this emergency will arise, and Mr. Ravenstein believes the population of the globe will reach this figure in 284 years more. He points out that the average decimal increase is 8 per cent, divided as follows: Europe, 8.7 per cent; Asia, 6 per cent; Africa, 10 per cent; Australia and Oceanica, 30 per cent; North America, 22 per cent; South America, 15 per cent.—*Jour. Amer. Med. Ass'n.*

Death Under Nitrous Oxide Gas Due to Tight-Lacing.—More than one fatality from tight-lacing has recently been noticed in our columns (*Lancet*). In all conditions in which free respiration becomes a necessity, if the vital processes are to be carried on, tight lacing means death. Of all states, that in which a patient takes an anesthetic is the one when absolute freedom of breathing is a necessity. Unhappily, but few know this elementary fact in physiology, and hence the sad death of a girl who had taken nitrous oxide gas at a dentist's rooms, and while recovering from its influence had a fatal attack of syncope. The statement is made that her stays were five inches too small for her natural body, a disparity of shape which, we imagine, the dentist might have seen and acted upon before he ventured to give the unfortunate girl nitrous oxide gas.

Dangers of Athletic Sports in Childhood.—M. Le Gendre, of Paris, in an article on this subject, showed that the period of growth created certain morbid predispositions, as a tendency to excessive arterial tension, manifested by palpitations, epistaxis, pains in the head; in arthritic individuals, susceptibility to chill when the body is in a state of perspiration; in neuro arthritic persons, a tendency towards atony of the stomach, increased by the abundant ingestion of fluids; in others, of nervous temperament, a predisposition to headaches, tics, chorea, and a craving for violent distraction.

Under such conditions it is easy to understand how excess in physical exercise may be followed by serious consequences. After violent games of foot ball, tennis, or the too prolonged use of the bicycle, the fever of over exertion may supervene, with the complications that accompany it, as prostration, curvatures, pain, osteomyelitis, dyspepsia with great anorexia, dilatation of the heart, palpitations, syncope, true asystole, and possibly hypertrophy, articular inflammation, or typhlitis.

The author therefore believed it of great importance for parents to have their children examined before allowing them to give themselves up to any particular sport, and to forbid it if there be any trouble of the circulatory, locomotor, digestive, or nervous system; to insist upon progressive and gradual increase of the exercise, whatever it be; and, while encouraging athletics and gymnastics, to forbid any competition in these sports. *Revue des Maladies de l'Enfance in Ann. of Hyg.*

The Use of Alcohol in Diseases of Children.—Dr. August Seibert, in an article on "The Uses of Alcohol in Sick Children," published in the May number oi the *Archives of Pediatrics*, considers first its application in the gastro-intestinal diseases. He makes the general statement that we can exclude all forms of gastro intestinal disturbance in children from the list of diseases in which alcohol is beneficial. In acute cases, even in cholera infantum, large quantities of water with a small amount of black coffee or tea will stimulate better than alcohol. It is besides not irritating to the mucous membrane, already in a diseased condition. It is especially irrational and harmful to administer alcohol in the diarrheas of children before the stomach and bowels have been freed from all putrefying material.

In typhoid fever he rarely gives alcohol to children or adults. In children the disease usually runs a mild course, and seldom relapses if proper diet is adhered to. Stimulation is rarely required.

In fibrinous pneumonia and broncho-pneumonia in children the author disapproves of the enormous quantities of alcohol which are frequently given. He does not use it in pneumonia, except when collapse threatens or is present. Then he uses it in large doses and in concentrated form. Alcohol fed children will digest less perfectly in pneumonia than those whose stomachs have not been insulted in this way. Children who have received large amounts of alcohol do not regain their appetite and digestive power after the attack is over as those do who are treated without it.

In scarlatina alcohol is not tolerated by the stomach during the first few days. In severe cases the author has not seen any good results following its use. In mild cases it is out of place. The same is true of measles. In septic conditions during scarlet fever the judicious use of light wine sometimes seems to be beneficial.

In diphtheria the free use of alcohol has been universal. In mild cases the author does not administer it. Whenever the heart seems to fail he uses it in large doses, but only for a short time. As most cases of diphtheria are of mixed infections, it is proper to assume that the heart weakness may be caused by some of the other germs rather than by the specific bacillus. In nephritis alcohol in large doses can only do harm.—*N. Y. Medical Journal.*

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Wherein and To What Extent the Wearing of Glasses is Abused.

BY T E. MURRELL, M.D.,

Professor of Ophthalmology, Barnes Medical College, St. Louis, Mo.

Read before the Missouri State Medical Association, at Hannibal, Mo., May 21, 1895.

The title of this paper was suggested by that of one read before this Society a year ago by Dr. J. H. Thompson, and published in the volume of Transactions for last year, viz., "The Use and Abuse of Glasses in Children."

I shall not confine myself, however, to the study of the adaptation of glasses to children only, but shall include all persons whose accommodation is still active, and who, for one reason or other, are advised to wear glasses.

Mark Twain gives a very humorous explanation of why nearly all Germans wear glasses; viz., out of sheer gratitude to the inventor of the Babcock Fire Extinguisher with which he so dexterously slew the dragon, and for which deed of valor he was awarded the right of sole manufacturer of spectacles for all Germany.

We have no patron saint nor canny legend to account for the extensive and rapidly growing custom of wearing glasses in this country by persons of all ages, but a suggestion in the answer the little man with the Babcock Extinguisher made to the king when he asked him how he proposed to kill the dragon without weapons, viz., "by science."

In the investigation of the laws of Nature man has, in modern times, sought out many inventions, and among these are means and methods of adding to his own comforts and capabilities.

From a rude beginning the subject of refraction has been developed into one of the most scientifically accurate and refined of all the branches of knowledge appertaining to ophthalmology, the most nearly exact of all the specialties.

I am not so sure that the relative increase of refractive errors is so great as is sometimes claimed. I well remember when a school-boy, other boys who had great difficulty in keeping up with their class on account of their eyes, and some who were forced to abandon school and take up farming or some trade on account of "weak sight." Many of these cases, with the present light before me, I recognize as hyperopes and astigmatics. It has not been a generation since some of our leading specialists blasted the hopes and aspirations of many a bright and ambitious young man by advising for him a life in which little use of the eyes would be required. In many of these cases only some refractive or muscular error existed which we at this day succeed in relieving, and permit the vaulting ambition to pursue its flight after fame.

There is no question but that the enervating influences of modern life, especially in the large cities, tends greatly to increase the faulty construction of the human eye, but what probably more than all else increases the demand for glasses is the incessant labor put upon the eyes in the numerous vocations of our highly cultured life.

Careful and accurate measurement of thousands of eyes has shown that few are free from optical errors. We know, however, that the compensating power of Nature is very great, and we would naturally expect to find disturbance of function only where the error was sufficient to amount to something of an infirmity. But this we know not to be the case. The smaller errors, especially of astigmatism, which in the days of Donders were entirely ignored, are now counted the most important and distressing often times.

Some are ready to deny the percentage of refractive troubles among young persons of school age.

By special request a few years ago I carefully tested the vision and examined the refraction of all the girls and boys who made complaint of their eyes in three large schools and, to my suprise, I found about twenty-five per cent whose vision failed to come up to the normal standard on account of ametropia.

The question which presents itself is, shall glasses be prescribed in every case of ametropia, or, in other words, shall we attempt to make an emmetropic eye out of every ametropic one?

Practically, it does not seem that we would go very far to find an answer to this question. The following rule will cover nearly every case: If the use of the

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eyes gives rise to discomfort due to refractive error, glasses should be worn; if not, then glasses should not be worn unless to improve vision as in myopia and high hyperopia, or even high astigmatism, in which there is sometimes no distress, and as a corrective aid in incipient strabismus.

We now know that the greater distress does not by any means come from the higher errors, but rather more frequently is asthenopia met with in the medium and lower grades of ametropia, especially of astigmatism. Quite a war was made on the 0.25 D. cyl. a few years ago when so forcibly advocated by Dr. Chisolm, but it is no longer regarded as a myth in practical ophthalmology, although so declared a little more than a year ago in an editorial in the *Journal of the American Medical Association.*

Dr. Starky very ably refuted this aspersion in a paper read at the San Francisco meeting last year, based upon the replies to enquiries sent out to the most competent ophthalmologists of the United States.

In this paper, from the same census of opinions, he also pronounced in favor of the decidedly beneficial effect of weak spherical glasses in many cases—of 0.75 D. or less.

It is the opinion of some medical men that too great refinement has been attained by specialists in this particular work of adapting glasses, in which opinion an occasional specialist will coincide.

There is no iron-bound rule that can be followed in determining the necessity for wearing glasses, the quarter diopter cylinder being far more important in one case than a one or two diopter cylinder in another. A thorough knowledge of the eye, a careful study of the patient and a large experience only will give anything like uniformly satisfactory results.

Astigmatism is very liable to give rise to asthenopia; if so, it should be fully corrected, for, as has been shown by Drs. Risley and Conner, neglected astigmatism in the young commonly goes into higher and more serious errors later in life.

Myopia ought always to be corrected early and the correcting glasses constantly worn. Hyperopia ought to be corrected whenever there is any tendency to strabismus to very near or quite its full amount, whereas in other cases it calls for correction only when accommodative asthenopia manifests itself. This is variable and dependent on accommodative strength.

I have seen 1 D. hyperopia give rise to distress in adolescents. When I correct hyperopia I usually correct quite closely—to within 0.50 D. or 0.75 D.

The statement that has been made that it is "unnatural" for little children to be seen on the streets wearing spectacles does not necessarily make it *unwise.* I have often prescribed glasses for very small children with great satisfaction to myself and gratification to them. I have now several "little tots" from four to six years old, wearing glasses from 2. D. to 4. D spherical who ask for their glasses every morning because they see so much better and more comfortably with them than without. I have seen accommodative asthenopia in children from seven to twelve years of age with less than 2. D. of hyperopia; and I relieved a long persistent series of headaches in a young girl with a + 1.25 s., her total hyperopia being 1.75 D.

The majority of ophthalmologists are now agreed upon the very close correction of all refractive errors that give rise to asthenopia.

I hardly believe in the efficacy of the + 0.25 s. in the young. I not long since saw a boy of fourteen wearing + 0.2 s., o. u., prescribed by a specialist of national reputation. In this same boy I found under a cycloplegic 1. D. H., with 0.25 D. As. at 180°. I ordered + 0.50 s. ⊃ + 0.25 c. 90° with complete relief to the eyes.

From what has been said of the very large proportion of refractive errors to be met with in highly enlightened communities it is not strange that there should be so great a demand for glasses. Wherein, therefore, comes the abuse of glasses, and to what extent does such abuse exist?

We may consider first the errors of the ophthalmologists. Some men in their haste do not take pains enough and only imperfectly correct.

Others trust too much to their skill with the ophthalmoscope, or ophthalmometer, or shadow test and order glasses by formulæ thus obtained without resorting to a cycloplegic; or, possibly the trial case is dispensed with.

Such work is oftener incorrect than otherwise, as I have frequently had occasion to verify by re-examining some of these same persons under paralysis of the accommodation.

A lack of discriminating judgment in allowing for accommodation, or in deciding the proper formula in cases of anisometropia leads to imperfect results in some cases.

These are all avoidable errors and are seldom found in the work done by competent and careful men. It is a very common observation that nearly all the glasses sold young persons by opticians are incorrect. They generally under-correct hyperopes, over-correct myopes, and imperfectly choose cylinders for the astigmatic.

This is unavoidable, however thorough their knowledge of the optical peculiarities of the eye, since they are mostly unacquainted with the physiology of this organ as well as its many pathological peculiarities, and are also deprived of the use of means to control the accommodation, so essential in determining the refraction of the young. By far the greater number of persons on detecting some defect of vision go first to the optician, especially if there is no severe pain or outward inflammation. This, as we can readily see, is a matter of economy.

If the optician is an honorable one and is satisfied the case is one beyond his reach he wisely, and in the interest of the patient, refers him to some competent ophthalmologist. But if the optician can fairly well suit him with glasses he prefers to accept the selection, nine

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times out of ten, although otherwise advised, rather than incur the further expense of a consultation. But the optician has learned that many of these cases so referred, fail to go to the specialist, but buy glasses of some other optician less conscientious, and so he loses a customer.

The better class of opticians would prefer to send all doubtful or difficult cases to the specialist, if the party thus advised would be as considerate and return with a correct prescription for glasses for him to fill. But it is in this as in every other business; the man who conducts an honest business always succeeds best in the end.

The great bulk of man- and woman-kind, however, are fitted with glasses by unqualified peripatetic spectacle venders, who sell to every man, woman and child who will buy their wares.

It is difficult to make an estimate, but it is probable that fully nineteen out of twenty of all the spectacles worn come from the optician or vender without the eyes having ever been seen by an oculist. It is well known that every pair of spectacles may prove potent for good or evil to the eyes of the wearer, especially during the active stage of accommodation. This being so we can form some conception of the *extent* to which glasses are *abused*. It is not so much the number of persons wearing glasses, as the number wearing improperly fitted glasses that may lead to harm.

Contrary to too many persons wearing glasses I doubt not my observation will accord with that of other ophthalmologists when I say, that there are numerous persons—hundreds in my own knowledge—who are doing themselves a great wrong by not wearing glasses.

There are thousands of hyperopes, myopes and astigmatics who positively refuse to wear glasses on account of a false pride or some personal prejudice against their use. We see, therefore, that the abuse of glasses may consist in the refusal to wear them.

The State's Care of Dipsomaniacs.

BY CHAUNCY P. PALMER, M.D.

Read before the Ohio State Medical Society, Thursday, May 16, 1895, Columbus, Ohio.

To invite attention, to secure thought, to demand action, is the purpose of this paper.

Dipsomania is a disease—a lesion over which the victim has no volition, but beyond the power of his self control; of indefinite recurrence; a periodic insanity—and because of the environment, not amenable to successful therapeutics in private practice. The physician is left helpless because of the want of co-operative helps and imperative restraint.

Its victims are the brightest flowers of intellectual and social gardens and grandeur. The brightest mentality, and the ardent heart pulsations, represent the large majority of the alarming array.

The disease is amenable to rational treatment, and the governments of men are responsible because they do not secure the prevention necessary to redeem the increasing numbers of unwilling victims.

It is not the intention or purpose to-day to inquire into the causation. Whether hereditary or acquired, or both, I do not know. Neither is it the purpose to detail the peculiar pathological and psychological conditions set up, nor the structural changes and nerve disintegration, but to declare that which is believed to be the consensus of the best thought and awakened humanity of the medical profession.

To secure that which in fact may be declared essential, imperative, in the rational and successful treatment of dipsomania is the object of an institution, or hospital, where safe environment, medical treatment, moral inspiration, physical strength, mental and will powers, and the re-birth of a true manhood may be secured. To give such support and guidance over and beyond the attacks of the peculiar mania, is the demand of to-day.

Science and experimental observation have determined the existence of the disease proper. Its voluntary recurrence and phases of periodicity are clearly made. The victim is an irresistable, insane subject of the peculiar trance, oblivious to his acts, and ofttimes unconscious of them afterward. During the attack he is in no way the same actor. But while the culture of all intelligent people has characterized the existence of the disease as irresistable, the courts have held the helpless sufferer responsible to statutory law for acts done while in the trance, or the condition of mental and moral blank. The rulings, findings, charges and verdicts of the courts have been against the maniacal defendant. Besides the inestimable injury to society and to man in his life relations, the courts adjudge him a criminal, and so construe the statutory enactments as to consign him to penal institutions or the gallows.

The disintegrating processes that produce or result from dipsomania are to-day better understood than in the past, and should awaken a new interest in devising a remedy for the future. The courts have struggled with this momentous question, but for its solution they have been unable to determine the differential sane or insane condition.

By the benevolent and humanitarian acts of government many changes and great advancements have been wrought, reflecting the sunlight and life of a quickened and new-born humanity, evincing a clearer understanding of man and his relations to society, and of the great law declaring that each man is the keeper of his brother. Yes, I repeat, in the twilight of the nineteenth century, the State has built hospitals and asylums for all other forms of maniacs, for all other classes of the insane—for the dipsomaniac she has provided penitentiaries, poor houses, and the scaffolds. But yesterday the State provided a hospital for the epileptic—for the care and cure of epilepsy, a recognized incurable disease. For this I rejoice, you rejoice. It separates and gives relief to the overfull institutions of the State; it will give

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needed care and help and good to that class of sufferers. But how much greater the demand and rationality of providing for a much larger class of curable maniacs.

More than a quarter of a century ago an appeal was made to this Society for this much needed and recognized work of science and humanity, but we were complacently told that the lawmakers of the State were not educated to the necessity. May we not hope that such education now has been received.

At one of the sessions of a recent legislature, the members of that body had before them and under advisement and contemplation the creation of a so called "Keeley Cure" by the State, and the noted Dr. Keeley was to be the Moses who would lead us from the wilderness. Ye Gods, what wondrous wisdom!

True, because of the failure of the State to act in establishing an institution for this class, private enterprise, inspired by laudable professional zeal and ambition, has opened an avenue to give help to the dipsomaniac. We have in Ohio at least one institution of excellence and high character, and doing great good. But of necessity this, or like institutions, can have but a limited influence, and are restricted in their work. They are confined to a certain class and few, and can not extend to the many. The establishment of such institutions by private or corporate enterprise makes an added argument and emphasizes the demand upon the state for action.

The State has been generous, munificent, in caring for her wards, and the profession of medicine ever has been watchful of the needs of the State's wards. The first public provision for the care and cure of the insane of Ohio was the inception and effort of the fathers of this Society, and each advanced movement has been the result of the want made known by the medical profession. I pay tribute to the commonwealth; I pay tribute to the profession; my heart pulsates with a laudable exultation that my birth and life labors have been cast in the noblest State of States, comprising the grandest republic of man—and I hope to see this jewel set in her heart of munificence.

The State's care of dipsomaniacs would result in the reflection of the sunlight of a new life in thousands of homes; the redemption and preservation of thousands of noble natures, which otherwise would be lost, destroyed; making manifest a truer Christianity, and a more humane and merciful administration of law; making clearer the pathology and psychological condition of the dipsomaniac; making the cause and the cure of the mania a solved problem.

The highest inspiration, the noblest ambition of the American statesman and of the American medical man, should be the production in America of the best type of manhood and the best type of womanhood in the world.

Dr. Samuel E. Milliken has removed to No. 72 West 49th Street, New York.

EDITORIALS

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All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

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Dr. Blickhahn's Death.

Only two weeks ago the REVIEW had a leading editorial regarding the appointment of Dr. Walter L. Blickhahn as Superintendent of the City Hospital. To-day we have the sad duty to perform of recording the death of this gentleman. A gentleman he was in the true sense of the word. Endowed by Nature with an inquiring mind Dr. Blickhahn was particularly fitted for the study of natural sciences in general, and medicine in particular. Besides this natural fitness for his chosen profession the deceased enjoyed the advantage of a most liberal medical education. After graduating at the St. Louis Medical College in 1882, he was an assistant at the City Hospital for a year, then he studied at the Universities of Strassburg, Heidelberg, Vienna and Berlin, returning to his native country after two years' sojourn at those centers of medical learning. He has since been engaged in private practice, esteemed and loved by his colleagues and patients.

Dr. Blickhahn took charge of the City Hospital Thursday, May 16, and day and night unsparingly applied himself to the task of thoroughly familiarizing himself with that institution. The work was very telling on a nervous system already overtaxed. Sunday afternoon,

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May 19, he took dinner at the home of Alfred N. Eaton. his father in-law. He complained of feeling slightly unwell, but no one thought that anything of a very serious nature affected the Doctor. He himself seemed to realize that his condition was worse than any one imagined, for only last Sunday evening he remarked to Dr. U. L. Russell, Assistant Superintendent of the City Hospital, "I believe this is going to be a bad business for me." Dr. Russell suggested that some one should sit up with him Sunday night, but Dr. Blickhahn did not think it necessary, and retired to bed about 7 o'clock. Night Watchman Young was then instructed by Dr. Russell to look in upon Dr. Blickhahn every hour or so. The Superintendent's family had not yet been installed at the Hospital. At 10 and 12 o'clock the Doctor was found sleeping soundly. At 1:35 Monday morning his breathing was heavy and labored. Watchman Young at once notified Dr. Russell, who summoned Drs. Luedeking, Fischel, Bremer and Mudd, and also Mrs. Blickhahn and the sick man's brother. Everything known to medical science was applied. The doctor lingered unconscious between life and death, slightly recovering, then relapsing, growing weaker as time sped, until 10:15 o'clock in the forenoon, when he died in the presence of his wife, his brother, H. A. Blickhahn, and the physicians.

***

Three or four years ago Dr. Blickhahn had an attack of the grippe after which he has always been complaining. About a year ago, when his urine, which the deceased himself had frequently examined microscopically with negative results, was analyzed by a chemist, it was shown to contain arsenic and it was further determined that the arsenical poisoning was due to the wall paper with which his room was papered. He then went to Europe in order to recover his health and returned much improved. Nobody suspected a grave affection, and it is generally believed that the great nervous strain to which he had been subjected for several weeks before his appointment as Superintendent of the Hospital and his final confirmation by the Council, was the cause of his sudden death. Upon microscopic examination of the deceased's kidneys no signs of nephritis were discovered, although the kidneys were found to be damaged. There being extravasations of blood into the glomeruli, (according to the report of Drs. Bremer and Luedeking), being a sign of great vascular congestion. Hyaline and granular casts were seen in the uriniferous tubules. Hyaline and granular casts as well as albumen had also been found in the post-mortem urine. There were no anatomical signs of a damaged nervous system. There was a cicatrized cavity at one apex of the lungs, which had been diagnosed also intra vitam. There were deposits in lungs, spleen and kidneys of an inflammatory nature, consisting of round and giant cells but, according to Dr. Bremer's statement, no tubercle bacilli were demonstrated.

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By the death of Dr. Blickhahn the medical profession of St. Louis has sustained an irreparable loss. The interest which the deceased took in all matters appertaining to science of medicine and to the medical profession has endeared him to every reputable member of the St. Louis medical profession. He was an open, honest, true and amiable character and consequently universally liked. His patients have lost by his departure a true and loyal adviser and his colleagues a dear friend. His death, occurring under exceedingly tragical circumstances, best known to his more intimate friends, affects with the deepest sorrow everybody who had, like us, the good fortune to be well acquainted with him. Dr. Blickhahn was a protector and defender of good, true and noble principles; he hated what is base, contemptible and wrong. He died a martyr of his calling. He will continue to live in the memory of his many friends and colleagues.

Dr. Otto Sutter Appointed as Dr. Blickhahn's Successor.

Dr. Otto Sutter has been appointed by Mayor Walbridge as Superintendent of the City Hospital, and his appointment will no doubt meet with the approval of the medical profession of St. Louis; for among the many competitors for the position he was one of the most eligible ones. It is generally believed that Dr. Sutter, like his unfortunate predecessor, will discharge his duties with impartiality. We know Dr. Sutter to be a gentleman and that he will have at heart the welfare of the institution and of the patients confided to his care. We are also confident that he will do the right thing by his colleagues, in fine, that he will make a good Superintendent. *Le roi est mort, vive le roi!*

The Meeting at Hannibal.

The meeting of the Missouri State Medical Association May 21, 22 and 23, has been a most enjoyable and profitable one. President Richmond, of St. Joseph, delivered the annual address. The meeting was well attended and the papers read were of an interesting nature. The opening prayer was offered by Rev. S. D. Dutcher, of the Christian Church. The address of welcome was made by Mayor Albertson, and response by Dr. J. N. Baskett for the Hannibal Medical Society, and President Richmond for the Association. Reports from the various committees were received and discussed at length.

The scientific as well as the social features of the meeting were most gratifying and each member went home with the agreeable consciousness of having added his mite to the good work and contributed to the success of the meeting. It may be needless to add that the citizens of Hannibal, who are well known for their hospitality, did all in their power to entertain their guests. Resolutions were adopted by the Association expressing thanks for courtesies extended by the citi-

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zens' committee of arrangements and the Hannibal Medical Society. The ladies accompanying the visiting doctors visited the famous Hannibal Cave and a banquet was tendered the guests at the Park Hotel.

On the last day of the meeting the visitors attended a fish fry at the club house, where they were royally entertained by the citizens of Hannibal. The election of the following officers for the ensuing year met with general approval:

President—Dr. Leslie C. Hall, of Kansas City.

Vice-Presidents—J. H. Thompson, H. C. Schutte and J. J. Russell.

Recording Secretaries—Frank R. Fry and F. B. Hall.

Corresponding Secretary—C. F. Wainwright.

Treasurer—C. A. Thompson.

Thus closed the ever memorable thirty-eighth meeting of the Association. Sedalia was chosen as the next meeting place.

[The titles of the papers read at the meeting appear under Society Proceedings of this issue.]

A Four Years' Course Required.—The American Medical College Association, in a well attended meeting, by an overwhelming vote sustained the action taken at San Francisco, and permanently fixed the minimum requirements for graduation at four years of instruction in the medical college, the course each year not to be less than six months. Immediately after this action the colleges in Louisville not already belonging to the Association signed the constitution and became members. This insures the co-operation of the larger medical colleges of the Southern States, and will doubtless be followed before long by the other Southern colleges.

A proposition was received from some of the representatives of the Southern Medical College Association to the effect that if they wounld be allowed two years in which to come up to the four years' course, they would apply at once for membership. The difficulties under which these schools would labor in an attempt to adopt the four years' course at once were fully set forth, and the Association appreciated the progressive and friendly spirit in which the proposition was made; but it did not seem practicable to provide for two grades of colleges in the Association; however, a resolution was unanimously passed that hereafter the representatives of the Southern colleges be invited to the annual meetings of the Association as guests. No changes were made in the present rules of the College Association.

Officers elected for the ensuing year were as follows:

President.—Dr. William Osler, of Baltimore.

Vice Presidents.—Drs. J. M. Bodine, of Louisville, and D. W. Graham, of Chicago.

Secretary and Treasurer.—Dr. Bayard Holmes, of Chicago.

Judicial Council.—Drs. D. S. Reynolds, of Louisville, W. H. Pancoast, of Philadelphia, and Victor C. Vaughn, of Ann Arbor, Mich.—*Journ. Am. Med. Ass'n.*

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, April 20, 1895; the President, F. D. MOONEY, M.D., in the Chair.

***

DR. W. H. MAYFIELD presented a "Left Kidney," which had been removed on April 16, for "Pyonephrosis."

The patient from whom the specimen was obtained was a man of robust physique, a harness maker, twenty-five years of age. He had been in good health until October, 1893, when he complained of great pain in the left lumbar region. Nothing serious developed until September, 1894, at which time he was compelled to go to bed. On October 28 of the same year, the pain grew in intensity and was accompanied by chills occurring every other day. A diagnosis of nephritic abscess was arrived at after a consultation, and patient was operated upon by Dr. Willis P. King, of Kansas City. About two gallons of pus was evacuated, but the abscess reformed after the wound healed up. On November 24, he had a second attack similar to the first. An operation was then performed with a view of removing the kidneys, but the organ could not be found. The cavity was cleansed and drainage maintained by means of a drainage tube. This tube has been in position ever since, except at a few short intervals, when it was removed only at the expense of patient's comfort. The discharge of pus and urine was caught up in a bottle which patient had strapped to his back.

The operation of removal was performed on April 16, and presented nothing of special interest, aside from the difficulty experienced in cutting through the great amount of cicatricial tissue, the profuse hemorrhage and the difficulty encountered in finding the organ. A large quantity of gauze was required as packing to control the hemorrhage, and patient was considerably shocked by the operation. He rallied in a short time and the temperature rose only once to 101° F., and that was after removal of the gauze packing. It fell to 98.8° soon afterwards, and has been at that point since.

***

DR. LUDWIG BREMER being called upon, gave a verbal communication of "The Blood Changes in Neurasthenia, Together with an Account of Experimental Neurasthenia."

He had examined the blood in several hundred cases of neurasthenia, with a view of finding, if possible, any characteristic anatomic changes. The result of these investigations has been that he is able, at present, to diagnosticate a case of neurasthenia from a blood ex-

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amination alone, without looking at the potient, without making an examination, without asking for symptoms, providing he can safely exclude florid secondary syphilis, melancholia and recent recovery from some acute infectious disease. The test is so certain that if the blood of twelve persons be examined, eleven of whom are healthy and one neurasthenic, the neurasthenic can be picked out without looking at the faces, an examination into the constitutions, or an inquiry into the habits.

The cardinal symptoms of neurasthenia, as laid down by Charcot, for instance, are head-pressure, vertigo, great exhaustibility, so called nervous dyspepsia, vasomotor instability and, frequently, pain in the nape of the neck. One symptom which is not mentioned among these and which, in the speaker's opinion, is the principal one, the cardinal symptom, is that of morbid fear, of fright or apprehension. It shows itself in some peo ple in the "going to die" feeling; they are afraid of go ing on the street or of being alone lest they should die; and these are the neurasthenics.

In order to appreciate the value of a blood examination in neurasthenia it will be necessary to consider, for a moment, some of the anatomico-histologic peculiarities of the blood.

Those who have studied human blood say that the red blood corpuscle has no nucleus. This observation does not tally with the conclusions arrived at by the speaker. According to his observation the red blood corpuscle—or erythrocyte, as it is called—has a nucleus in a rudimentary form, which does not stain differentially from the discoplasm, and which, under ordinary conditions, cannot be seen. But in pathological conditions when decay sets in it can be made visible with the eosin-methylene blue stain, occupying the central area of the erythrocyte; and, by the way, it has often been mistaken for the plasmodium malariæ. These bodies progress to a state of complete development, of maturity, and are then expelled from the erythrocyte. When there is an excessive amount of decay going on in the red blood corpuscle we will find large patches of these platelets in a certain proportion of blood. These platelets, or blut plaettchen, constitute the so-called third corpuscular element of the blood. They were discovered in 1876 by Schultze, then re-discovered by the French hemotologist, Hayem, and were finally described by Bizzozero. They have also played a notorious part im medical literature. In 1870 a young physician of Vienna, by the name of Lostorfer, claimed that he could diagnosticate syphilis by an examination of the blood. He looked upon these same platelets as being the syphilis corpuscles, and he could, in fact, pick out syphilitics from healthy persons by the great multitude of these elements. But it was afterwards demonstrated by Stricker that they were not peculiar to syphilis, but that they were found in moderate numbers in normal blood, and in abundance in a variety of pathological conditions.

This anatomical peculiarity, the enormous production of the blood platelets that takes place in secondary syphilis, is also observed in pronounced neurasthenics. The largest patches were found in those cases where the "going to die" feeling and the extreme exhaustibility were most marked.

There was at one time a suspicion, in the mind of the speaker, that possibly very great exertion leading to muscular fatigue would cause this rapid decay of the erythrocytes, but an examination of the blood of horses before and after a trip failed to reveal any increase whatever in the number of platelets. It was then supposed that animals might be found that were naturally nervous and could be rendered neurasthenic by some means or other. Taking it for granted that fear, fright, was an essential and characteristic symptom of neurasthenia in man, a number of animals were subjected to fright by placing them in a swing so that they could not exert their muscles to any extent, and depriving them of their equilibrium. Fowls and mammals were experimented upon, and this particular method of frightening them was chosen by taking the behavior of animals during an earthquake into consideration, at which time animals are more frightened than man. In some the effect was so pronounced that they died in the swing. An examination of the blood of these animals showed, with almost mathematical precision, the degree of fright which the animal had sustained. The increased number of platelets—that is to say, the degree of decay of the erythrocytes, indicated, with a degree of certainty, how profound and how long continued had been the fright to which the animal had been subjected. In other words, fright destroys the red blood corpuscles—that is to say, the oxygen carriers—and with the help of this fact many of the symptoms of neurasthenia can be explained.

One symptom which is frequently present, although it is not mentioned at all by some writers and not emphasized by others, is the so called nervous asthma, the inability to draw a long and satisfactory breath. If, by dint of great muscular exertion, patients do succeed in drawing a long breath, they do not feel the relief which generally attends that procedure. This is referable to the excessive oxygen hunger of the organism. Owing to their rapid decay the red blood corpuscles can not perform their functions of taking up the oxygen as it enters the lungs. In the same manner we can explain the frequent yawning or gapping of neurasthenics. The forcible and spasmodic inspiration of the atmosphere denotes that the body is suffering from oxygen starvation.

Again, the great exhaustibility, the muscular incapacity, is explainable in the same manner. Although the muscles may be strong and voluminous, they lack the power of contractility because the diseased red blood corpuscles are not capable of supplying them with the proper amount of oxygen.

Another symptom of frequent occurrence, although very little stress is placed upon it by some writers, is the "going to sleep" of the extremities, even in the wak-

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ing state. This condition is possibly explained when we consider the size of the platelet patches. They are often six or seven times as large as single blood corpuscles, and may, under certain conditions, obstruct the capillaries and cause the sense of paraesthesia from obstructed circulation. It may be relieved, as is well known, by rubbing the extremities, causing the blood to move.

The irritability and the rapid, tumultuous action of the heart, and the mental irritability and depression may also be referred to the condition of the blood. If there are a great many platelets, that is to say, free nuclei in a state of decomposition, there is something in the blood which does not belong there, the whole blood is altered, perhaps poisoned. It is a kind of auto-intoxication of the blood which causes the utter depression of the spirits, the loathing of life and the want of energy. Thus, this auto-intoxication does not arise exclusively, as is generally said, from the morbid process and absorption of morbid products of digestion which goes on in the intestine, although these conditions may help it.

Whether all the symptoms of neurasthenia are referable to this condition of the blood is not definitely settled. It may be probable that there are several kinds of neurasthenia. But it is the speaker's intention to demonstrate, in a future article, that neurasthenia is not merely a nerve affection, but that it is, to a great extent, a disease of the nerve nourishing fluid, the blood If we treat the blood we may treat successfully and, in some instances, cure neurasthenia. The statements made to-night are not based upon theory, but are the result of examinations of several hundred cases, and studies in comparative anatomy. Although sometimes in doubt, speaker had always returned to his original idea, that neurasthenia is a blood disease. The diagnosis by examination of the blood is so firm that a case of neurasthenia can be differentiated from hysteria, which, a great many say, are the same thing; and a case of hypochondriasis can be differentiated from neurasthenia, which are also considered identical by some. Hysteria has been diagnosticated and demonstrated to exist by subsequent examinations of the patients, in cases that were pronounced as neurasthenia by other physicians. Upon the advice to look for hysterical stigmata they were found although they were masked and had been mistaken at first sight.

Whether this finding will have any practical results it is at present impossible to tell. The question is beset with difficulties. It is, to the speaker, a well established fact that the blood of the sleepless neurasthenic furnishes the greatest number of platelets; and the neurasthenic who sleeps, and above all the one who loses his fright, will show that the decay of the erythrocytes is growing less. Fright is the worst poison for the neurasthenic, and to remove fright means also to improve the condition of the blood and the general symptoms in neurasthenia.

Cannabus indica is the great courage inspiring remedy; it will cause the neurasthenic to be artificially inspired with courage and thus make him feel better, whilst when given in hysteria the symptoms grow worse.

Quassia is not only a good bitter tonic, but it has neurotic properties and is so a good remedy in neurasthenia. This remedy, together with bromides administered in doses of from 30 to 40 grains daily, has a marked effect on the diminution of the platelets. Whether this is due to the sleep produced by the bromides, or to the direct influence on the red blood corpuscles, it is impossible to state. The salutary effect of the bromides in small doses can be demonstrated directly by a microscopical examination of the blood.

Dr. Johnson asked Dr. Bremer what method he uses for coloring these platelets, and how he prevents them from running together. If we allow them to pass through a one per cent osmic acid or salt solution they will run together, and that would interfere with the examination.

Dr. Bremer had made these experiments many times and had found, as the doctor correctly states, and which is contrary to the assertion of other observers, that the formation of patches is not prevented by a one per cent osmic acid or salt solution in those cases where the platelets form; that is, in neurasthenia, for instance, secondary syphilis and after acute infectious diseases. In these conditions we find patches composed of 15, 20 or more platelets sticking together even in osmic acid. He had taken particular care and pains to verify these observations, since he became suspicious of his own results after reading a statement by Dr. Kemp, made in a publication of "Johns Hopkins University" and published six or seven years ago, in which it was claimed that the formation of the patches could be prevented by the one per cent solutions.

In spreading the blood with one cover glass over another, or by means of a piece of cardboard over a cover glass, a chance is offered for these minute and viscid platelets to stick together, and by this means the patches could be produced. But speaker maintained that the patches can be demonstrated to exist in the blood in certain pathological conditions.

Dr. Morris asked Dr. Bremer if he had examined the blood of the animals before placing them in the swing and whether they were free from platelets.

Dr. Bremer said that, of course, is understood; the experiments would be worthless without that. This method of testing his theory suggested itself in a rather peculiar way. He had sent to the butcher for a chicken and instead received a guinea fowl which was frightened almost to death when brought. An immediate examination of the blood revealed an extreme decay of the erythrocytes and a liberation of nuclei which was very distinct and could not be mistaken. The blood of a chicken was then examined and not the slightest trace of the condition was found. After 24 hours the blood of the guinea fowl was again examined and showed no

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trace of the former peculiarity. It was rapidly reproduced, however, upon frightening the animal.

DR. JOHNSON.—Have you ever been able to examine the blood of a man who was badly frightened?

DR. BREMER had had that opportunity only once, and that was in a man suffering with chronic myelitis, who had slipped and fallen upon the ice. When entering the office he was pale as a ghost and feared that he had broken his back. An examination of his blood showed an enormous decay of the red blood corpuscles.

DR JOHNSON had observed, in making blood examinations, whether in searching for the plasmodium malariæ or in cases of neurasthenia, that the blood platelets would run together in all cases and in that way prevent him in estimating their number. He asked Dr. Bremer as to his method of calculating the number.

DR. BREMER said that the blood platelets have a tendency to run together in all kinds of blood, of healthy or neurasthenic patients, and they also have a tendency to stick to foreign bodies. When a drop of blood is placed on the edge of a cover glass and then spread from this edge to the opposite side, the greatest number of platelets will be found at the beginning of the spreading surface, because they have a tendency to stick to the edge of the glass. Even in the blood of a healthy person you will find some patches at the beginning of the spreading surface, but in that of a neurasthenic you will see nothing but patches, and they are full of platelets, not two or three, but fifty and more. This appearance is so striking that by looking over any one of the large collections of specimens it can be determined from what edge the spreading was begun, and also the blood of neurasthenics.

Of course, this condition may vary owing to a faulty preparation of the specimen or to some condition which has temporarily altered or interrupted the discharge of the platelets. In this way the blood of an indubitable neurasthenic presented a perfectly normal appearance at one examination. He had been indulging in alcoholic liquors and had regained his nerve tone and physiologic courage temporarily. In this way it was determined that alcohol prevents the formation of the platelets. Whether there are other conditions that temporarily suspend the decay, speaker was unable to say at present. It is a fact that the platelets vary extremely in the same individual, but it is not known upon what time of the day and upon what condition this variation depends.

Illinois State Medical Society.

The forty-fifth annual meeting of the Illinois State Medical Society took place May 21, 22 and 23 at Springfield, Ill. The morning session of the first day was devoted principally to the discussion of topics bearing on the practice of medicine and therapeutics. Papers were read as folllows:

"Lithemia," by Dr. C. W. Hall, of Kewanee.

"Observations on Modern Therapeutics," by Dr. E. F. Ingalls, of Chicago, read by Secretary McNally.

"The Diagnosis of Uræmia," by Dr. A. R. Edwards, of Chicago.

"Hysteria and Organic Disease," by Dr. H. T. Patrick, of Chicago.

At the afternoon session papers were read as follows:

"The Abortive Treatment of Typhoid Fever," by Dr. D. W. Aldrich, of Galesburg.

"Antiseptics as Applied to General Practice," by Dr. C. C. Hunt, of Dixon.

"Some Abnormalities of Physical Conformation Observed in Criminals," by Dr. Daniel R. Brower, of Chicago, President of the Society.

Dr. Ensign, Chairman of the Committee on Medical Societies, submitted a report on the status of local medical societies and gave an interesting account of the organization of the State Society, in 1846 and 1847, including sketches of the lives of many of the founders of the organization. The venerable Dr. Robert B. Boal, of Lacon, who was present at the preliminary Convention held in Springfield in 1846, and was at the first meeting in 1846, was at the session to-day.

In the morning of the second day a telegram was sent to the Missouri State Medical Association, extending fraternal greeting, which was responded to by a message from Dr. Fry, Secretary of the Association, expressing the belief that a closer union of the medical societies will result in future welfare.

Tha first paper of the session was by Dr. Robert Leudeking, of St. Louis, who delivered the aderess upon invitation. His paper was upon "Bacteriology," in which he discussed the question of toxine, antitoxine and serum therapy. He was followed by Dr. Duncan Eve, of Tennessee, who delivered an entertaining lecture on "Surgery." Mr. Joseph J. Kinyon, of the United States Marine Hospital, delivered the annual oration, in which he talked of the management and control of infectious and contagious diseases in municipalities.

In the evening there was a banquet at the Leland Hotel.

Dr. John B. Hamilton was the first speaker on the programme, and his subject was "The Medical Profession of Illinois." The menu was prefaced by skull and cross bones, to which Dr. Hamilton took exceptions. He was very strenuous in his objections to it and insisted that the hostelry had exhibited poor taste in making light of his profession.

Among those who responded to toasts were Gov. Altgeld, Lieut. Gov. Gill, Speaker Meyer, Dr. W. R. McKenzie, Dr. J. N. Randall, Sarah Hackett Stevenson, John L. White and Mrs. I. L. Firebaugh. The banquet was attended by the members of the Association and members of the Legislature and their friends.

On the third, the closing day of the meeting, resolution were adopted denouncing the pharmacy bill now pending in the Legislature.

Officers were elected as follows:

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President—Dr. O. D. W. Graham, Chicago.
Secretary—Dr. John D. Hamilton, Chicago.
Treasurer—Dr. George N. Kreider, Springfield.
The next meeting will be held at Ottawa.

Medical Association of Missouri.

The following papers were read at the Hannibal meeting:

Rational Medicine—W. F. Mitchel, Lancaster.

Adenoid Vegetations of the Vault of the Pharynx and Their Relation to Diseases of the Middle Ear—Hal Foster, Kansas City.

Report of Committee on Surgery Pathology of Tubercular Arthritis—J. F. Binnie, Kansas City.

Symptoms of Tubercular Arthritis—Jacob Geiger, St. Joseph.

Treatment of Tubercular Arthritis—T. F. Prewitt, St. Louis.

Immunity from Diseases, Natural and Acquired—L. I. Matthews, Carthage.

Pleuritic Effusions with Special Reference to Surgical Treatment—J. P. Thatcher, Pisgah.

A Board of Medical Examiners vs. the Diploma Law—Daniel Morton, St. Joseph.

Cancer, Its Treatment—G. Wiley Broome, St. Louis.

Ainhum with Specimen—A. H. Ohmann Dumesnil, St. Louis.

Autoinfection with Report of Cases—G. R. Highsmith, Carrollton.

Wherein and to What Extent the Wearing of Glasses is Abused—T. E. Murrell, St Louis.

Practical Points on Abdominal Drainage—Pinckney French, St. Louis.

Tuberculosis and Its Treatment by Physiologic Therapy—Paul Paquin, St. Louis.

Some Observations on Nucleon Therapy—J. N. Baskett, Hannibal.

Serotherapy in Bone and Joint Tuberculosis—G. W. Cale, St. Louis.

Some Surgical Instruments—Emory Lamphear, St. Louis.

Pathology and Treatment of Empyema—F. J. Lutz, St. Louis.

The programme of the afternoon session embraced the following:

The Mechanism and Management of Occipito-Posterior Positions—W. H. Bryant, Savannah.

Injuries to the Head—Jabez N. Jackson, Kansas City.

Ulceration of the Sigmoid Flexure as a Sequel of La Grippe, with Report of Cases—Leon Strauss, St. Louis.

A Few Remarks Relative to Left Inguinal Colotomy—S. G. Gant, Kansas City.

After-Care of a Laparotomized Patient—A. H. Cordier, Kansas City.

The Treatment of Compound Fractures—A. L. Fulton, Kansas City.

Plastic Surgery—R. M. Funkhouser, St. Louis.

Brain Tolerance of Uremic Poison—J. Bummel Jones, Kansas City.

Legislation in Missouri for the Prevention of Blindness in Children—H. M. Post, St. Louis.

The Rubber Bulb in Operations on the Bladder—Francis Reder, Hannibal.

Traumatic Separation of the Lower Epiphysis of the Femus Justifiable—C. C. Moore, St. Louis.

Physiology of Quickening—R. H. Goodier, Hannibal.

Perineal and Uterine Lacerations, with Statistics of 329 Cases—W. H. Mayfield, St. Louis.

American Medical Association.

At the Baltimore meeting of the Association all proposed amendments to the Constitution have been indefinitily postponed and the meeting in this respect has been a most satisfactory one to the overwhelming majority. Also the scientific work has been carried out in a most satisfactory manner. For the following short review of the work done in the various sections we are indebted to the *Journal of the American Medical Association:*

Practice of Medicine.

An unusually large number of papers were read in the Section on Practice of Medicine. The topics were well selected and the authors gave more than usual care to their preparation. We have a pleasure in store for our readers who were not present at the meeting, in the perusal of the papers of this Section.

Surgery and Anatomy.

The work of the Surgical Section comprised the presentation of forty papers. Of these papers all but ten were read. The latter were read by title, and will be published in the proceedings of the Section. Whereas the range of subjects covered the entire field of practical surgery, a number of special subjects were extensively considered. Among those of special interest were, "The Surgery of the Kidney and Ureters," and "Modern Methods of Cystoscopic Examinations of the deep Urethra and Bladder." Abdominal surgery was further considered in papers and discussions upon, "Appendicitis," "Intestinal Obstruction," and "Surgery of the Gall-Bladder." To accomplish the reading of all the papers, the Chairman of the Section felt it incumbent without favoritism to enforce the twenty minute rule as to the reading of papers, and the five minute rule for the discussions. The good judgment of the Section at large was amply illustrated in discussing particularly those questions which were of paramount interest, and passing, without comment, papers of less general interest and importance. Altogether, the work of the Section was fully equal to the best efforts in the same direction of previous years. If any exception could be taken to this work, with the view of improving Section work for the future, it would be in the number of the papers read. As the Section work is now constituted,

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the Chairman of the Section is not empowered to refuse volunteer papers. The time must come when all papers will be presented to a proper committee and deemed worthy of a place upon the program before they can be submitted to the Section by their authors. J. R.

Obstetrics and Diseases of Women.

The work of the Gynecologic Section was satisfactory to a high degree. As will be seen from the reports, the papers presented were of an unusually high order, both as to subject matter and manner of treatment. The discussions were spirited and were led by men qualified to speak with weight upon the points at issue.

The attendance at each session was large and interested, the only drawback to the enjoyment of the meetings being the difficulty of hearing speakers in so large an auditorium, the accoustic properties of which were bad. Withal, the Chairman of the Section, Dr. Franklin H. Martin, is to be congratulated upon the unqualified success of the department over which he presided. The Chairman-elect of this Section is Dr. Joseph Tabor Johnson, of Washington, D. C. H. P. N.

Ophthalmology.

The sessions of the Section on Ophthalmology brought together probably the largest number of working ophthalmologists that have ever assembled in America. The restriction of papers to ten minutes, and of remarks in discussion to five minutes for each speaker, was noted to be more effectual in keeping out matter lacking general interest, and in holding the speakers to the point under discussion, than any other means that have been tried.

In arranging the work of this Section all the papers on the same or related topics had been carefully grouped together; and time had been provided for their discussion, and speakers invited to open the discussions. The result was not only that large number came to the meeting to attend this Section, but that they closely followed its sittings up to the last day of the meeting.

The series of papers on operations on the ocular muscles; and other methods of treating muscular anomalies; on plastic operations about the eye; and on astigmatism, with the discussions they elicited, will long be remembered by those present. What was felt to be the most serious defect in the program was the arrangement of receptions on the evening of the Section dinner. The annual dinner has become a highly appreciated occasion of reunion; and the feeling in this Section is very strong that in arranging for future meetings one evening, preferably the second, should be devoted entirely to Section dinners. E. J.

Neurology and Medical Jurisprudence.

The Section on Neurology and Medical Jurisprudence at the Baltimore meeting, had the largest attendance and the greatest number of scientific papers of any previous meeting of the Section. The average attendance exceeded that of any other Section of the Association.

The scientific work was arranged principally in three symposia. to wit: hypnotism, electricity and epilepsy, and about a dozen papers were read on miscellaneous topics on neurology. The discussions were unusually good, and participated in by some of the ablest neurologists in America. D. R. B.

State Medicine.

The Section on State Medicine had an unusually large attendance. There were thirty eight papers on the program, twenty-two of which were read. The symposium on alcohol by members of the American Medical Temperance Association was one of the distinguishing features, and the character of the papers was of high scientific value. The appointment of a special commission to investigate the alcohol question will doubtless be hastened by these preliminary discussions in the Section. The Section, as will be seen elsewhere, loyally adhered to the Association movement for the establishment of a Department of Public Health.

Diseases of Children.

This Section, which has languished for the last two years, sprung into new life under the active efforts of its Chairman, and the meeting this year was the largest ever held. In scientic value the papers were fully equal to those of the Detroit meeting, which up to this time has been supposed to be its best meeting.

Laryngology and Otology.

The work of this Section exhibits the same general advance in interest that was manifest last year. The attendance was more than three times that at San Francisco, and several of the leaders who of late have been conspicuous by their absence from the Association meetings, were present and warmly welcomed.

South-Western Kentucky Medical Association.

The South Western Kentucky Medical Association met May 21 and 22. Considerable business was transacted, and many interesting papers were read. Dr. Swope, of Marion was elected President; Dr. B. T. Hall, of Marshall County, Junior Vice-President; Dr. J. T. Reddick, Senior Vice-President; Dr. P. H. Stewart, Secretary, and Dr. C. H. Brothers, Treasurer. Dr. Wathen, of Louisville, was elected an honorary member for life.

The next meeting will be held at Bardwell on the last Tuesday in October. A resolution was adopted inviting the State Medical Association to meet here next year.

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ABSTRACTS

MEDICINE.

The Physiological Action of the Extract of the Suprarenal Capsules.—The *Journal of Physiology* for April publishes three papers on this general subject. The first, by Dr. G. Oliver and Mr. E. A. Schafer, was read at a recent meeting of the Physiological Society, of London. In this communication the authors referred to some earlier experiments showing that when an extract, whether prepared with water, alcohol, or glycerin, of the suprarenal bodies of the calf, sheep, or dog was injected—even in very small quantities—into a vein in a dog or a rabbit the following pronounced physiological effects were produced in a few seconds:

1. Extreme contraction of the arteries, which was shown to be of peripheral origin.

2. A remarkable and rapid rise of the arterial blood-pressure, which took place in spite of powerful cardiac inhibition, and became further augmented when the vagi were cut.

3. Central vagus stimulation, so pronounced that the auricles came to a complete standstill for a time, although the ventricles continued to contract, but with a slow, independent rhythm.

4. Great acceleration and augmentation of the contraction of the auricles and ventricles after section of the vagi—the auricular augmentation being especially marked.

5. Respiration only slightly affected, becoming shallower.

A large number of observations made on dogs, cats, and rabbits since last March have confirmed these results, and enabled the authors to determine others. As in their earlier experiments, watery decoctions of the glands were chiefly employed by them. The suprarenals experimented with were derived from the calf, the sheep, the dog, the cat, the guinea pig and man. The physiological results were exactly the same whatever the source of the glands, except in two which were taken from subjects of Addison's disease. The following effects are given by the authors:

1. As a rule, when the intravenous mode of administration was adopted, a definite small quantity of the extract representing a known weight of the fresh gland was injected. In exceptional instances, however, a continuous flow of a five per cent solution of the extract was employed. In these instances the physiological effects were maintained during the entire time the injection lasted, but without the development of other apparent symptoms and without causing death. In this way large doses of the extract were administered to the dog, thereby producing the most violent cardio vascular disturbance without causing a fatal result.

2. In a former communication the inference as to the extreme contraction of the arteries from observations on the blood-pressure, from the use of the limb plethysmograph, and from the arrest of the flow of normal saline through the vessels of a frog caused by the addition of a small quantity of suprarenal extract. Several observations with the oncometer have confirmed this conclusion and have shown that it may be extended to the vessels of the kidneys; for the tracings have shown a well-pronounced reduction in volume of that organ during the suprarenal effect on the circulation.

3. It has been observed that stimulation of the depressor nerve does not produce the usual reduction of the blood pressure while the effects of the suprarenal injection last; that is, if the depressor nerve in the rabbit is stimulated at the height of the pressure caused by intravenous injection of suprarenal, the usual fall of blood pressure is not produced, and no depressor result is to be obtained until the blood-pressure has returned to the normal or nearly so. The depressor result re-appears simultaneously with the Traube Hering curves, if these are seen at all in the tracing.

4. It has invariably been found that the heart's action is remarkably accelerated and augmented in the dog, the cat, and the rabbit after section of the vagi. In view of this powerful stimulation of the heart in mammals, it was rather surprising to find a comparatively small effect produced by the extract on the frog's ventricle. It was not found that solutions of less than one per cent of suprarenal extract in Ringer's circulating fluid would affect the frog's ventricle with certainty, recording its pulsations in a heart-plethysmograph.

The following results, however, were obtained with this and with stronger solutions—up to five per cent:

a. Reduction of diastole, with consequent acceleration.

b. The abolition of groups of contractions and the setting up of continuous pulsation.

c. The arrest of the ventricle in systole.

As this extreme effect of the extract was not prevented or antagonized by potassium chloride, the conclusion was that it was due to calcium salts in the extract; for Ringer has shown the calcium effect upon the contraction of the frog's ventricle is counteracted by potassium. Moreover, the individual contractions do not show the characteristic calcium effect. On the contrary, each individual contraction remains normal, although the acceleration produced by the drug may ultimately be sufficient to prevent the completion of the diastole, and the contractions may thereby be caused to run together.

5. The paralyzing effect of the subcutaneous injection of the extract—about one or two grains—in the frog has not been observed in other animals experimented on in this way, except from lethal doses in the rabbit. It has been observed, however, in dogs subjected to intravenous injections of the extract, that

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when the muscles were electrically stimulated through the nerve supplying them, a modification of the normal contraction was apparent, the relaxation being delayed, as in the case of frog's muscle. This effect, moreover, not only was observed while the suprarenal rise of the blood-pressure was being recorded, but was traceable for some time after that rise had passed away. It was therefore inferred that the active material was probably taken up by and remained for a time stored within the muscular tissues.

6. No definite effect was obtained upon the secretion of the submaxillary gland as the result of injecting suprarenal extract into the blood. The chorda tympani was not found to be any less active in promoting the secretion of the gland in an animal the blood-vessels of which were contracted by the extract.

7. It was found that when two extracts were prepared of equal strength—1 to 100 of normal saline—one of the cortex and the other of the medulla of the fresh gland, the intravenous injection of the former would not produce the characteristic cardio vascular disturbance, while that of the latter in the same dose would induce it in a marked degree. It is, however, the authors say, somewhat difficult to prepare the cortical extract perfectly free from a trace of the medulla, so that it may happen that a comparatively large dose of cortical extract may produce a slight physiological effect; but not more than that of a much smaller portion of the medullary extract. The conclusion, therefore, is that the active principle of the extract is present in the medulla only, the effects obtained from the extract of cortex being small and inconstant and probably to be explained by accidental contamination or post-mortem diffusion.

8. Experiments were made with suprarenals from three subjects—one in which the glands were healthy, and two others in which they were diseased (cases of Addison's disease). The healthy organs provided an extract of great physiological activity, whereas the diseased adrenals afforded one which gave a purely negative result.

9. In view of the oral administration of the extract as a remedy, it seemed desirable to ascertain whether peptic digestion impaired its active properties. A little of the watery extract of the gland was added to artificial gastric juice (pepsin + 0.2 per cent of hydrochloric acid) and exposed to a temperature of 104° F. for twenty-four hours. The intravenous injection of a small quantity of this and of an equal portion of the same extract diluted at the time to the same extent with 0 2 per cent of hydrochloric acid produced identical physiological effects. The injection of an equivalent amount of acid as a check experiment produced no effect. The authors, therefore, do not think it likely that stomachic digestion will seriously lessen the physiological properties of the extract.

10. Experiments were made with the view of ascertaining how the extract was eliminated or disposed of, and whether the active principle was destroyed in the blood. This seemed not improbable, as it was found that alkalies and oxidation destroyed the activity of the extract. It was observed, however, that when allowed to stand in freshly drawn blood with free exposure to the air, or with complete exclusion of air for twenty-two hours, the extract possessed the same activity as when preserved in exactly the same manner in normal saline. It was also ascertained that clamping the renal vessels or the suprarenals themselves did not prolong or perceptibly modify the duration of the effect produced on the blood-pressure by the intravenous injection of the extract. As an altered contraction of the muscles was observed to persist after the subsidence of the cardio-vascular disturbance set up by the injection, it seemed probable that the active principle of the extract passed out of the blood into the muscles, and remained there for a time.

The authors have shown that in Addison's disease the adrenals may become notally devoid of the physiologically active material. If these bodies are to be regarded as eliminators of toxic materials rather than as producers of materials which are of definite physiological value, the toxic materials they should remove or destroy might be expected, in cases in which their function is in abeyance, to pass out by the kidneys. They have found, however, that an extract prepared from the urine in Addison's disease has precisely the same effect when injected into a vein as that of an extract prepared from normal urine. In fact, all the evidence they have leads them, says Dr. Oliver, to view the function of the suprarenal bodies—at least the medulla—as secretory rather than destructive, and the secreted product as being in all probability of great physiological importance for maintaining the tonicity of the muscular tissues in general, and especially of the heart and arteries.

The second article is by Dr. Moore, of the University College, London, On the Chemical Nature of a Physiologically Active Substance Occurring in the Suprarenal Gland. He gives the following account of some experiments:

The first experiments were made with a glycerin extract of which one part was equivalent to one of the fresh glands. A portion of this extract was treated with ten times its volume of absolute alcohol, filtered from the resulting precipitate, and evaporated to a syrup at a temperature of 158° F. This residue was dissolved in normal saline, tested physiologically by venous injection, and found to be very active. The precipitate caused by the alcohol was also extracted with normal saline and the extract injected and found to be inactive. Boiling the original extract, or a solution prepared by treating it with alcohol as described above, did not destroy any of its active properties; also on subjecting it to the action of acids or alkalies for a few minutes, then neutralising and injecting, the extract was found to be still active. But it was shown by subsequent experiments that boiling for three or four hours with water alone, or heating to 104° with even very dilute alkalies for a similar period, completely destroys

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the physiological activity of the substance, while heating to 104° for a like time with different acids, varying in strength up to ten per cent, left it quite untouched.

A water extract of the gland was prepared by mincing the glands, covering with water for a few hours, boiling for a few minutes, and then filtering. This filtrate was evaporated to dryness at a temperature of 158° and a brown-colored residue obtained, of a sticky, wax like consistence when warm, becoming brittle on cooling, and very deliquescent. This residue was found to be very active. It was extracted with various organic solvents — viz., ether, chloroform, carbon bisulphide, amyl alcohol, benzene, and ligroin, as well as with mixtures of these solvents, but the active principle was not dissolved by any of them. Repeated extraction with boiling absolute alcohol gave a brown colored wax similar to the original residue; even in hot absolute alcohol this wax, which it is impossible to dry completely, is very feebly soluble, and in a later experiment it was shown that the fresh glands dried at 104° and then, after several extractions with anhydrous ether, placed under absolute alcohol, had a mere trace of the active principle extracted from them even after several days' standing. The water extract, boiled and filtered, was saturated with ammonium sulphate, which caused a scanty precipitate; the filtrate from this, diluted with its own volume of water, gave a strong effect, a check experiment showing that an equal amount of half saturated ammonium-sulphate solution had no such action. The precipitate caused by saturation was extracted, injected, and found to be inactive.

The water extract was distilled in a vacuum at a temperature between 122 and 140, and the distillate was found to be inactive. The brown residue remaining was also distilled *in vacuo* and the portion coming over below 212° and that between 212° and 356° collected separately and tested, as well as an extract of the charred residue—all three were found inactive. The brown residue which softens and becomes semifluid between 140° and 176° chars rapidly when heated above 302°.

Some fresh glands were dried at 104°, then, after several extractions with ether, and after standing for some weeks under absolute alcohol, wre extracted with a small quantity of distilled water, and the filtrate allowed to dialyze into distilled water through parchment paper. The dialyzate was strongly active.

This dialyzate contains some substance possessed of a powerful reducing action. Such a substance has already been described as occurring in the gland by Vulpian, and his observations have been confirmed and extended by Virchow, Arnold, and Krukenberg.

The solubilities of the active principle, says Mr. Moore, are exactly the same as those of this reducing agent. Experiments in which portions of the cortex and of the medulla were carefully separated and made into extracts, demonstrated that the active principle was also confined to the medula. Heating with dilute alkalies destroyed the active substance, and it also oxidized the reducing agent. Oxidation of an active extract for a few minutes with peroxide of hydrogen developed a rose red coloration and at the same time very materially weakened the physiological effects of the extract. These considerations, says the author, point to the fact that the active principle and the body giving these peculiar reactions are probably identical; and in all cases where extracts possessing active physiological properties were afterward tested chemically for this reducing agent, it was invariably found to be present, while in those cases in which no physiological effect was obtained the reducing agent was found absent by chemical tests.

The action of various precipitants was tried on the dialyzed extract. Platinic chloride gave no precipitate. A small precipitate was obtained by the use of this reagent in an alcoholic extract, but, on decomposing it with sulphureted hydrogen, filtering, neutralizing, and injecting, no effect was obtained, and the original filtrate from the platinic chloride, after removing the excess of that reagent, gave a strong effect. A similar result also, says Mr. Moore, was obtained with mercuric chloride. Potassio-mercuric iodide gave no precipitate. On adding phosphomolybdic acid, the solution turned green and a blue precipitate fell, both, he says, evidently due to the reduction of the reagent. Nitrate of silver gave a white precipitate which rapidly turned black from reduction, even when kept in the dark, and, on heating, a silver mirror was rapidly obtained. The various extracts, says the author, were found not to reduce Fehling's solution even after boiling with mineral acids, and yielded no crystalline product when heated with phenyl hydrazine.

On passing a solution of the brownish resin obtained by evaporating the water extract to dryness through animal charcoal, to decolorize it and obtain a purer product, a colorless filtrate was obtained, yielding on evaporation fern-shaped masses of crystals, but on testing a solution of these no physiological effects were obtained, and the active principle could not be re obtained from the charcoal by boiling with water. On trying the effect of smaller quantities of charcoal it was found that the solution, instead of being decolorized, became more deeply colored. Probably, says the author, the active principle is first oxidized by the charcoal and afterward decolorized.

The results obtained up to the present time are briefly stated as follows:

The active principle is soluble in water and in dilute alcohol; its solubility decreases with the percentage of alcohol present until with absolute alcohol it is almost insoluble. It is insoluble in ether, chloroform, amyl alcohol, carbon bisulphide, benzene, or ligroin.

It is not attacked by acids nor by boiling for some minutes, but is destroyed by alkalies, by oxidizing agents, and by continued boiling.

It is not precipitated by excess of alcohol, by saturation with ammonium sulphate, by mercuric chloride, potassio-mercuric iodide, or tannic acid.

It does not reduce Fehling's solution alone or after

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boiling with mineral acids, and it does not form a crystalline compound with phenyl hydrazine.

It is not volatile, either alone or with water vapor. It dialyzes freely through parchment paper, and the highly active dialysate so obtained is completely free from proteids.

With regard to the proteids of the suprarenal capsules, Mr. D. N. Nabarro, also in the same journal, remarks that an investigation was started with the view of ascertaining the nature of the proteids derived from the suprarenal bodies. The materials employed for examination, he says, were the suprarenals of calves. They were extracted with a five per cent solution of manganese sulphate within twelve hours after death. The proteids obtained were, for the most part, of the nature of globulins; in other words, they were, with one exception, precipitated by saturation with manganese sulphate. The temperatures of heat coagulation were 132.4°, 149°, and 167° F. One albumin was present in small amount, coagulating at 159.2° F. The proteid coagulating at 132.4° was a globulin. It left no trace of a residue on digestion with artificial gastric juice. The coagulating at 149° left a very small residue on digestion; and the proteid coagulating at 167° also left a very small residue.

The extract of the glands made with five per cent of manganese sulphate gave on acidifying slightly with acetic acid a considerable coagulum at from 104° to 105.4° F. On repeating the experiment with a second extract, the precipitation began at a still lower temperature, at about 95°. On careful neutralization of the same extract, and on warming, a thick precipitate occurred at 104°. Whether this was a precipitation of a globulin or of a nucleo-albumin Mr. Nabarro says he is not at present able to assert definitely, but that it was probably of the nature of nucleo-albumin, he says, would appear from the fact that a considerable residue was left upon gastric digestion. No pepsin or peptone was present in these glands.—*N. Y. Medical Journal.*

Cerebral Muscular Atrophies.—Dr. Eskridge adds another to the series of cases in which marked atrophy of muscles has occurred in connection with cerebral palsies.

His case is that of a woman, age 42, who, three or four years ago, had a left hemiplegia from thrombosis of the right internal capular arteries. With this there was some anesthesia of distal portions of the limbs, and loss of the superficial and deep reflexes. There was marked muscular atrophy on the paralyzed side, together with reaction of degeneration in the atrophied muscles. At the request of Dr. Eskridge, Dr. Frederick Peterson added some general comments upon cerebral atrophies to the history of this case, as follows:

In the great majority of cases of hemiplegia there is no atrophy of muscles on the affected side. Sometimes we note a slight diminution in the size of the limbs involved, but this is merely from inactivity and disuse. It is not a true trophic change.

In certain rare cases, however, the diminution in size is so marked as to merit the name of an actual atrophy. These cases, one of which is described above by Dr. Eskridge, are so rare that, out of many hundreds of hemiplegias observed by me, I can recall but three or four in which the paralysis was accompanied by amyotrophy. Darkschewitsch found six out of fifty-nine cases of hemiplegia, examined for this purpose, presenting muscular atrophies.

The behavior of the muscles in electrical examination is of considerable interest, because reaction of degeneration has always been one of our most trusted means for differentiating the two kinds of paralysis due to lesions in the cortico-spinal and spino-muscular portions of the motor tract. Now, in some of these cerebral amyotrophies there is a change in the electrical reactions, but this change must be looked upon as exceedingly rare, even in these cases. As a rule, we shall find perfectly normal reactions as regards quantity and quality, whether to faradism or galvanism, in these cases of cerebral amyotrophy. The muscular atrophies from cerebral lesions behave in this respect very much like atrophies from joint lesions, the so-called arthropamic amyotrophies. But in a certain small minority of cases we may find some electrical changes, usually quantitative, very seldom qualitative.

As long ago as 1887 Wernicke called attention to the diminution of faradic and galvanic irritability on the paralyzed side in hemiplegia with hemianesthesia. Even before that, Erb, in his book on electricity, had noted the occasional occurrence of diminished excitability in hemiplegic cases. Quincke found very slight diminution of electrical irritabilitiy in his cases. In the six cases of Darkschewitsch the electric reactions were normal in four, and there was merely a quantitative reduction to faradism and galvanism in the other two cases. Eisenlohr reported both quantitative and qualitative changes—in his first case.

It is therefore proper to conclude that a reaction of degeneration in a case of cerebral amyotrophy is an extremely rare phenomenon.

What is, perhaps, of greater interest and importance in such cases is the origin of the atrophy. This is still a mystery, and one well worth solving. Various theories have been advanced to explain it, such as the following:

1. That there are trophic centers in the motor cortical area (Quincke),

2. That there are changes in the ganglion cells of the anterior horns (Charcot, Leyden, Brissaud, Joffroy and Achard).

3. That the atrophy is due to peripheral neuritis (Dejerine, Eskridge).

4. That the wasting is explicable on the ground of deficient nutrition due to purely vasomotor changes and diminished circulation (Roth and Muratow).

5. That there are functional disturbances in the spinal trophic centers due to dynamic influences from the lesion above.

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6. That there are functional disturbances in the spinal trophic centers due to dynamic influences of a reflex kind from below along sensory paths.

Now, as to the results of autopsies in such cases, there are but few good data at hand.

As to the cerebral lesions in such cases, they vary in site, but are mostly about the internal capsule and optic thalamus.

There is usually descending degeneration of the pyramidal tract involved.

The ganglion cells of the anterior horns were found normal in one case by Quincke, in two by Eisenlohr, in one by Steiner, and in one by Darkschewitsch. The ganglion cells of the anterior horns were affected in two cases reported by Joffroy and Achard.

The anterior roots were examined by Darkschewitsch and Steiner in their cases, and were normal.

The peripheral nerves were normal in all the cases where they were examined. Positive statements to this effect are made by Darschewitsch and Steiner. Eisenlohr found slight simple degeneration in some of the peripheral nerves. This should not be called a neuritis.

The muscles themselves, examined by Darkschewitsch, presented a simple, not a degenerative, atrophy.

Thus we may say that in four of the six autopsies here described there was none of the anatomical changes in the spino-muscular portion of the motor tract usually incident to amyotrophy. This is corroborated by four careful observers. The joint research of Joffroy and Achard, in which they describe changes in the anterior horns, stands alone in this respect.

It is worth while to consider, in connection with the cerebral amyotrophies of adults, the enormous retardation in growth of the affected extremities in infantile cerebral palsies. The paralyzed members grow, of course, as the child waxes in years, but the striking difference between the two sides can be explained only in one of two or three ways: Either there are trophic centers in the brain affected by the lesion, or the cerebral disorder influences dynamically the trophic centers in the spinal cord, or the retardation in growth may be due to vasomotor disturbances and insufficient blood supply on the side involved.

A peculiar feature, too, of the cerebral amyotrophies of adults, to which Darkschewitsch has called attention, is the occurrence of actual arthropathies in many cases of hemiplegia; and the coincident muscular atrophies in some of such cases may be considered as joint atrophies after all. It will be noted that the case recorded by Dr. Eskridge presented evidences of arthropathic conditions in the knee and ankle joints of the paralyzed side.

Altogether, then, we may infer that there are as yet no conclusive data upon which to found a tenable theory as to the origin of muscular atrophy in hemiplegia.

A clinical fact worth remembering is that, as a rule, the amyotrophy comes on very rapidly and early after the onset of the hemiplegia, being sometimes noteworthy within two days.—Drs. Eskridge and Peterson in *N. Y. Med. Jour.; Amer. Med.-Surg. Bull.*

Syphilis of the Spinal Cord.—Three years ago Erb described a form of spinal paralysis of syphilitic organs characterized by spastic paralysis of the lower extremities, marked increase of the tendon reflexes, slight muscular spasticity, disturbances of micturition, and comparatively slight disturbances of sensation. Sachs emphasizes the fact that there may be other forms of syphilitic spinal paralysis. In one case there was a flaccid atrophic paralysis with rapid recovery, and three cases were of a spastic type, with marked contracture, pronounced atrophy and sensory disturbances and varying vesical symptoms. Sachs considers that the characteristic features of spinal syphilis are the distribution of the morbid process over the entire cord, with simultaneous involvement of all three portions; the slight intensity of the morbid process compared to its extent, some functions of the cord being retained, while others are lost; a rapid change in some symptoms with obstinate persistence of others; and the frequency of earlier symptoms in the cord or in other parts of the nervous system. These conditions may permit the diagnosis of syphilis.

Gerhardt thinks that most cases of spinal syphilis are due to disease of the vessels and membranes, which later involves the cord. Important symptoms for diagnosis are rigidity of the spine, shooting pains, girdle pains, paraplegia, and Brown-Sequard's paralysis. The cause of Erb's type of syphilitic paralysis is thought to be due to multiple lesion of the roots. Only rarely does syphilis give rise to symptoms of muscular atrophy, poliomyelitis, anterior, or Landry's paralysis.

Lamy, after a study of several cases of spinal syphilis, concludes that the commonest affection is a diffuse meningo myelitis, accompanied by disease of the blood-vessels. The changes in the meninges and vessels are primary. There may be a syphilitic lepto-meningitis and pachymeningitis; the latter is most commonly situated in the cervical region. Spinal meningitis is often accompanied by cerebral meningitis, which is usually situated at the base of the inter-peduncular region and above the chiasma. The changes in the blood-vessels are first noted in the adventitia of the veins. The symptoms of meningeal disease are to be distinguished from those of disease of the cord. The prodromal period is characterized by meningitic pains in the back or head, ocular paralysis, and more or less severe cerebral symptoms. The second stage is characterized by spinal paralysis, usually presenting the type of a moderate transverse myelitis, spastic paresis of the legs, with slight impairment of sensation and slight involvement of the sphincters. In the minority of cases the paralysis is acute and severe, and, if not treated, leads rapidly to death.

Kuh has collected 62 cases of Erb's type of syphilitic spinal paralysis and allied forms, with six autopsies,

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and he considers that syphilis is not infrequently a cause of myelitis. The disease began in 36 out of 52 cases within six years after the infection. In some cases cerebral symptoms are first noticed, but usually the trouble begins with increasing weakness and stiffness of the legs, often accompanied with paresthesia, or a girdle sensation. Pain is seldom severe. Anesthesia is less common. With the weakness of the legs there is very apt to be some disturbance of micturition, and loss of sexual power. The weakness is very apt to be greater in one leg, and seldom increases to complete paralysis. Contractures are rare, but the reflexes are always increased. The course of the disease is very chronic and progressive. The prognosis, under proper treatment, is much more favorable than that of ordinary myelitis; 11 per cent recovered, 70 per cent were improved, and 7 per cent died. Relapses, however, may occur. The lesions are chiefly in the dorsal cord, and in the posterior part of the lateral columns; later the posterior cornua and posterior columns may become involved. As a rule, the meninges are little affected, the trouble being due to syphilitic changes in the smaller vessels of the cord—the marginal vessels of Adamkiewicz.—*Boston Med. Surg. Jour.*

A Microscopical Study of the Nerve Cell During Electrical Stimulation.—After describing in detail his apparatus, and giving a table showing the percentages of shrinkage of the nucleus in the various experiments, the author calls attention to the apparent lack of relationship between amount, duration, and intensity of stimulation, and the effect in change of the nucleus.

The sympathetic ganglion cells of the frog were used. These were kept in normal salt solution during the experiment, a continous stream of the solution being allowed to flow over the cells. The experiments were nearly all of them done with the coil at from 10 to 13 cm., and most of them showed a shrinkage in the volume of the nucleus varying from 12 to 75 per cent. the large majority showing a shrinkage of over 30 per cent.

The apparent discrepancy in the relationship between the different experiments is explained by the fact that in every instance the cells were removed from the body, placed in a stream of solution which it is impossible to make equal to the different cells, and in an electric field the intensity of which in any point it is impossible to regulate or even estimate. Nevertheless, there is a certain degree of relationship between some of the experiments, the course run by each cell in its fatigue, however, being distinct, though similar in character. By plotting the percentages in the table in curves there is expressed a general similarity in the form of the curve, although there is a distinct variability in character. These would show that the cell tires rapidly at first, and then more gradually to a condition of complete fatigue. This is at variance with former experiments, in which it was shown that the cell tires rapidly at first, then gradually, and then more rapidly again. The author calls attention to the fact that no correspondence should be expected between the two kinds of experiments, as in the present instance the cells were not living in a nutrient solution, but in a substance which is non-nutrient and capable of carrying off by diffusion waste matter of the cell's metabolism.

The author thinks slight shrinkage in the nucleus of the control-cells probably occurred in all experiments where simple sodium chloride solution was used, but it never reached the point where the nucleus began to show indentations.

Considerable attention was directed toward studying changes in the granulations of protoplasm during stimulation. Some were lighter and clearer; in others this was not so manifest, while in others oil droplets were observed. In one of the cells these gradually disappeared. Placed in glycerine after treatment with osmic acid, the cell protoplasm was seen to be pervaded by large irregular light spaces, probably the vacuoles observed in section. It was impossible to detect indications of vacuolation in the living cell.

In the nucleolus it was possible to detect granules which moved slowly about, and in several instances were extruded into the nucleus. This fact was confirmed also by consulting sections of spinal ganglia fixed in osmic acid and stained in safranin. In this connection the author calls attention to a change in his experiments and the unexpected result on the nucleolus. Potassium tartrate 0.1 per cent was added to sodium chloride and calcium phosphate solution, with a view of giving the cells a trace of potassium and more oxygen. In this case the movements of the nucleolus had every appearance of being amoiboid. The nucleolus of the control cell changed its shape somewhat, but retained its size, whereas the fragments of the stimulated nucleolus had all dissolved in thirty minutes.—C. F. Hodge in *Journal of Morphology; American Medico Surgical Bulletin.*

Complicated Hernia.—Dr. S. E. Milliken, of New York, in a paper upon this always interesting subject, read before the Alumni Association of the Northern Dispensary in November and subsequently published in the *New York Medical Journal*, of March 16, 1895, described some of the complications frequently met with in the diagnosis and treatment of inguinal hernia, which, while not dangerous, were nevertheless important. These were adhesions, undescended testis and hydrocele of the cord.

Adhesion in most commonly omental, the intestine being rarely involved. It often escapes detection owing to the absence of symptoms. It may be demonstrated by first reducing the hernia by taxis and then, by making traction on the card, reproducing it. Radical operation is advised, the method of Bassini being preferred.

Undescended testis does not occur so frequently. It is readily recognized. To relieve it the testis must be freed from adhesions and anchored in the scrotum. The canal is reconstructed after the method of Bassini.

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Encysted hydrocele of the cord is more often mistaken for hernia than any other condition. When small it can be reduced into the canal and will reappear if traction is made on the cord. It can readily be differentiated from hernia, however, by the absence of pain and the firmness of the swelling. Aspiration and the injection of carbolic acid is recommended.

The author arrived at the following conclusions:

1. Besides becoming strangulated, hernia may be complicated by adhesions, undescended testis and hyd rocele of the cord.

2. Omentum often becomes adherent without causing any alarming symptoms and is the greatest obstacle in the way of successful mechanical treatment.

3. The cecum may take on adhesions under an ill-fitting truss and yet not become strangulated.

4. Undescended testis rarely exists alone and is usually complicated by hernia.

5. Encysted hydrocele of the cord, while often mistaken for hernia, may be only a complication.—Buffalo *Med. Jour.*

Hysteria of Malarial Origin.—The deceptive simulations of hysteria, the annoyance and alarm which it may occasion in families, and its occurrence as complicating traumatisms, infectious diseases, and impaired conditions of the general health will always render it an important object of study. It has been demonstrated that, under the above circumstances, men of robust physique may be attacked by a disease which was formerly regarded as almost peculiar to women. We find, in a recent number of the *La Medecine Moderne*, two interesting and instructive cases reported from the neurological clinic of Dr. Bidon, of Marseilles, both patients being males. Hysteria occasioned by malaria modifies the symptoms of the latter and constitutes a form of malarial attack of pernicious appearance which is important to recognize. Dr. Clement in his thesis has collected eighteen cases of hysteria of paludal origin.

The first case of Dr. Bidon was that of a man, 22 years of age, free from antecedents, who had, in 1891, contracted diarrhea and intermittent fever in Tonquin. At the end of the same year he suffered from gonorrhea with double epididymitis, and soon afterward from syphilis with cutaneous eruptions, polyadenitis, and mucous patches in the mouth. The patient, who was a soldier, was treated with protiodide of mercury. At this time he was attacked by intermittent fever with short intervals between the paroxysms, which were always preceded by an aura and followed by loss of consciousness. The man returned to France in January, 1892. In 1893, after working in the vintage at Camargue, he set out for Marseilles and on the way was seized by a violent attack, accompanied by loss of consciousness, and lasting for about ten hours. He entered the Hotel Dieu on the evening of September 23, 1893, with a temperature of 36.4° C. (97.5° F.). On the following day, at 8 o'clock in the morning, the thermometer registered 39.8° C. (103.6 F.), and at noon 40° C. (104° F.). There were headache and disturbed stomach, crepitant rales at both bases with sibilant and sonorous rales throughout the rest of the chest. There was very marked hyperesthesia, especially to tickling. On the left flank was an hysterogenetic zone, pressure on which gave rise to a painful laugh with difficult respiration. On the 24th occurred an excess of fever, and the temperature mounted gradually. At midday the patient, who had been motionless and prostrated, suffered from an undeniable attack of hysteria. There were excessive movement and temporary contractures, the body being thrown into an arc of a circle. The crisis continued for about five minutes. On regaining consciousness he had no knowledge of what had happened. The temperature then fell.

Under the influence of quinine the attacks of fever progressively diminished in intensity and were not again accompanied by nervous paroxysms. He had never had hysterical seizures apart from an access of fever.

The second case concerned a man, 27 years of age, who entered the hospital, September 8, 1893. There was no hereditary tendency. In 1887 he had served in the marine at Tonquin. He had intermittent fever in 1888 and was three months in a hospital. For sixty days he had severe daily paroxysms with three decided hysterical outbreaks. At the end of six months a second malarial attack occurred, of the same intensity, complicated at irregular intervals with nervous crises, after which the malarial symptoms were a little less violent. In 1891 the patient was afflicted with bronchitis and anemia, for which he was sent home. He first entered the hospital in November, 1892, on account of an irregular intermittent fever, accompanied by right-sided hemiplegia with aphonia lasting two months. He was admitted a second time in September, 1893. On the 8th of that month he had experienced fatigue, with migraine, and in the evening was seized with a violent fever, lost consciousness, and manifested hysteria on admittance. There were convulsive movements, at first of an epileptiform character, and afterward clonic, followed by a phase of personal attitudes which continued nearly all the time, with a very violent delirium. The patient gradually recovered an amazed consciousness, without having completely lost the recollection of his delirium. The temperature stood at 39.2° C. (102.5° F.). On the 9th and 10th of the month there were milder paroxysms without crises. On the 13th, at 7 o'clock in the evening, he suffered a violent chill, followed by a high fever. A convulsive crisis then began, preceded by an aura consisting particularly of a globus hystericus then developing under the form of a very evanescent epileptiform period of irregular movements, the arc of the circle being well marked, and at last passionate attitudes, joining themselves rapidly to the delirium and constituting nearly all the crisis, which continued until 3 o'clock in the morning.

Upon examination the spleen was found hypertrophied and painful. Muscular force was notably dimin-

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ished upon the right side. The muscular sense was preserved. Sensibility to touch and pain was diminished on the right half of the body, and even abolished upon the hand and forearm. There was a zone of painful hyperesthesia upon the dorsal surface of the right foot. Sensibility to heat was absent upon the calf. The pharyngeal reflex was very weak. The visual field was notably contracted upon the right side. On the 17th occurred a new febrile access with a light crisis. The attacks returned every second day, often accompanied by crises, and were only terminated by injections of hydrochlorate of quinine.

At the time of dismissal, October 18th, the patient was free from malarial manifestations, but retained the stigmata of the neurosis. He had, however, made great improvement as regards mental condition and tendency to convulsions. His intellect, in fact, had been decid edly improved during the early period of his sojourn in the hospital.

The addition of hysterical paroxysms to malarial intoxication constitutes a veritable form of what has been called pernicious association. The co existence of hys teria gives, according to Dr. Clement, a dramatic effect to the attack, more alarming than dangerous. The symptoms of malarial hysteria are those which ordinarily belong to the neurosis, and their grouping has no peculiar characteristic, exhibiting in general a convulsive form, with incomplete attacks and sensory troubles in which hyperesthesia predominates. Malaria acting upon a weakened, nervous system produces an asthenia which favors the development of neuropathies. In most instances the specific poison acts as an irritant to the cerebral cells, either by the simple mechanical influence of contact or by the dissemination and absorption of a toxin.—*Medical Bulletin.*

Malarial Conditions.—For all malarial conditions quinine is the best remedy we have. But associated with this condition there is always more or less pain, which often renders the life of the individual uncomfortable, if not positively miserable. Antikamnia will remove these unpleasant symptoms and place the system in the best condition for the quinine to do its work. There are a number of ailments, not closely defined, which are due to the presence of the malarial poison. All such conditions are greatly benefited by the use of antikamnia and quinine. In headache (hemicrania), in the neuralgias occurring in anemic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition, the regular administration of this combination will produce the most happy results. In cases of malarial fever it should be given as a prophylactic and cure.

"Antikamnia and Quinine" are put up in tablet form, each tablet containing two and one-half grains of antikamnia and two and one-half grains of quinine, and is the most satisfactory mode of exhibition.

NOTES AND ITEMS

The Microscopical Society of Washington, D. C., gave its annual reception on the evening of May 13th at the National Rifles Armory. Many interesting exhibits were made by the different members.

The Treatment of Dry Pleurisy by a New Method.—Cerenville has proposed to the French Congress for Internal Medicine the injection into the pleural cavity of sterilized olive oil in cases of fibrinous pleurisy, for the purpose of diminishing the pain and exerting a healing influence. He claims that he has used this treatment with satisfactory results.—*Revue Internationale de Medicine de Chirurgie Pratiques.*

Preparation and Sale of Therapeutic Serums in France.—The following is the text of the law in France relating to the preparation, sale, and distribution of therapeutic serums and other analogous products, promulgated on April 25th last:

Article 1.—Attenuated virus, therapeutic serums, modified toxins, and analogous products that may be used for the prophylaxy or therapy of contagious diseases, and injectable substances of organic origin not defined chemically, that are applied to the treatment of temporary or chronic affections, shall not be distributed gratuitously or otherwise unless their manufacture or place of origin shall have been the object of an authorization of the Government given with the sanction of the Consulting Committee of Hygiene of France and of the Academy of Medicine. Such authorization shall be temporary and revocable. The said products shall be submitted to the inspection of a commission appointed by a competent minister.

Article 2.—The products shall be delivered to the public by pharmacists upon medical prescription. Each bottle or receptacle shall bear the mark of its place of origin and the date of its manufacture. In urgent cases physicians are authorized to furnish their patients with the said products. When the said products are destined to be delivered gratuitously to the poor the vials containing these products shall bear, stamped upon the glass, the words, "Public Assistance, Free." They may then be deposited, under the control of a physician, at such establishments as may be authorized by the administration to procure these products direct. The foregoing provisions shall not apply to Jennerian vaccine, either human or animal.

Article 3.—The sale and distribution of the substances mentioned in Article 1 shall be regulated by and come within the provisions of Article 423 of the Penal Code and of the law of March 27, 1871. Any fraud as to the nature of the said substances, knowing them to be fal-

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sified or adulterated, or any fraud or attempt at fraud in regard to the quality of the article delivered, will be publishable in accordance with the provisions of Article 423 of the Penal Code and of the law of March 27, 1871.

Article 4 —Any infraction of the present law will be punished with a fine of from 16 to 1,000 francs.—*Med Record.*

Association of American Medical Editors.—The American Medical Editors held their annual dinner, after some tribulation owing to some delays by train, and misunderstanding of the exact place and time of the banquet. The local committee-man, Dr. Canfield, was in no way to blame and did his best to make matters agreeable to all concerned.

At the business meeting on Wednesday appropriate reference was made to the loss the Association had sustained by the death of their late colleagues Dr. F. L. Sim, of the *Memphis Medical Monthly* and Dr. E. S. Elder, of the *Indiana Medical Journal.*

Steps were taken in the direction of better organization, and Dr. George M. Gould, of the Philadelphia *Medical News*, was elected President, Dr. Ohmann Dumesnil, of the St. Louis *Atlas of Dermatology*, Vice-President, and Dr. H. Bert Ellis, of the *Southern California Practitioner*, Secretary.

Next year it is proposed to make more prominent the literary feature of the meeting, and, to obviate the bad effects of delayed trains, the dinner will be held on Tuesday evening instead of Monday as heretofore.

The Typhoid Milk Can.—The recent distressing outbreak of typhoid fever in Stamford, Conn., traced unmistakably to the milk supply of one dealer, has awakened renewed interest in the question of the sanitary control of dairies and milk distribution. Dr. Welply, of Belfast, Ireland, has just issued a timely monograph on the subject—"Creameries and Infectious Diseases." He deals at some length with an outbreak of typhoid under his own observation in which the origin of the epidemic was traced beyond a doubt to the consumption of "separated milk" distributed from a creamery in the neighborhood. "Separated milk" is the skim milk left after the cream has been removed, to which is then added enough fresh milk to bring it just within the legal standard, and it is then sold as new milk in the large towns. As the creamery receives the milk from several dairies, one infected supply may pollute the product of all the others contributed to the same creamery, and in this way a single case of rural typhoid may become almost infinitely multiplied. Dr. Welply traced up such an infected dairy as the cause of the out break, and then goes on to show how minute a quantity of the morbific matter is capable of wellnigh indefinite multiplication in such an ideal culture medium as milk. He found in his examination that the cows in this dairy were milked by a person whose hands had been soiled by typhoid dejecta and that some of the dairy maids acted also as nurses to the sick. Among other practical points he refers to the fact that few cows can be thoroughly milked unless the hand and the teat be kept moist, to which end the majority of milkers wet both surfaces with the first portion of milk that is drawn. Dr. Welply advocates two principal measures of prevention—first, thorough and frequent dairy inspection by competent and independent inspectors; and secondly, compulsory notification of all cases of illness occurring in dairies which send milk to creameries.—*Jour. Amer. Med. Ass'n.*

Rewards of Early Rising.—Aside from the helminthous property ascribed to the early bird by the adage, a recent newspaper writer implies that if one would become a healthy and well-preserved monarch all that is necessary is to acquire the habit of early rising. In support of his theory he cites the Emperor Francis Joseph of Austria, who invariably retires to rest at 9 and is up at 5—sometimes even at 4—in the morning and who is "athletic, elastic and youthfully active." King Humbert of Italy, likewise remarkably well-preserved, is also up with the lark and has taken his first breakfast long before the majority of his subjects are out of bed. Among the early rises Emperor William, the Queen Regent of Spain, King Charles of Roumania, King Oscar of Sweden, King Leopold of Belgium—in deed, says this writer, "it only requires a passing glance at the various thrones of Europe to show that those monarchs most healthy and well preserved for their years are precisely those who, according to the new-fangled doctrine of the medical authorities, ought to be the ones most physically decrepit." The moral of which has been already pointed out: Get up early if you would be a healthy and well-preserved monarch.—*Jour. Amer. Med. Ass'n.*

The Attention of the Readers of the "Medical Review" is called to the change in the advertisement of ZYMOTOID, the New Diphtheria Cure, in this issue. The remedy is placed in the hands of any physician for investigation, on an *absolute guarantee* Read what Dr. Kruder, of Coffeyville, Kansas, has to say of it. Scores of such endorsements are at hand, and will be published "seriatim."

Free of Charges.—The therapeutical applications of Peroxide of Hydrogen (medicinal), Glycozine and Hydrozone. By Charles Marchand, Chemist. Ninth Edition.

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXXI. ST. LOUIS, JUNE 8, 1895 NO. 23

ORIGINAL ARTICLES

Pathology and Treatment of Empyema.

BY FRANK J. LUTZ, M.D., ST. LOUIS,

Surgeon-in-Chief to the Alexian Brothers Hospital; Chief Surgeon of the St. Louis & San Francisco Railway; Professor of Surgical Pathology and Clinical Surgery in the Beaumont Hospital Medical College.

Read before the Missouri State Medical Association, at Hannibal, Mo., May 21, 1895.

The vast majority of cases of pyo-thorax which have come under my observation were seen after the chest cavity was almost entirely filled with the purulent effusion. Many of them had not been recognized and had been treated for various pulmonary and hepatic affections, and many had existed for a long time. From this experience the inference is justifiable that, as yet, many physicians do not avail themselves of the methods of physical diagnosis, which when closely followed will almost surely lead to a correct interpretation of the symptoms. The recognition, early in its course, of an accumulating effusion in the pleural sac is of the greatest moment, both for the purpose of saving the life of your patient, which is endangered by septicemia and pyemia, as well as for the purpose of instituting such treatment as will permit the expansion of the compressed lung and the re-establishment of its function.

Permit me briefly to refer to the objective symptoms characteristic of a pleuritic effusion purulent or serous in its character.

Inspection reveals bulging of the intercostal spaces; a change in the apex beat of the heart; increased thoracic excursions of the healthy side and increased abdominal respiration. Palpation discloses the absence of vocal fremitus on the affected side. Percussion demonstrates flatness up to the infra clavicular space anteriorly and a splashing sound *may* be produced by succession, and on auscultation possibly bronchial breathing is heard posteriorly over that portion of the lung which has been forced into the cul-de-sac formed by the relationship which the ribs bear to the vertebræ. To settle all doubt as to the *existence* of a pleuritic effusion, as well as for the purpose of determining its *nature* the introduction through an intercostal space of the needle of a hypodermic syringe or of an aspirator should never be omitted.

Clinically and pathologically we are confronted with an abscess possessed of certain peculiarities owing to the anatomical and physiological characteristics of its walls, but an abscess, nevertheless, for all practical purposes.

These peculiarities consist of the rigidity of the thoracic wall on the one hand, and on the other of the elastic and constantly moving pulmonic structures, unless these properties have been interfered with by organized deposits of lymph.

After evacuation, an abscess heals by the coalescense of its walls through the granulation tissue which is formed. The obstacles in the way of the coalescence of the pulmonary and visceral pleura after the purulent effusion has been removed are found:

First—In the inability of the lung to expand because it is held down by the fibrinous deposit and later on by adhesions, the result of the organization of the exudate which accompanies inflammations of the pleural sac.

Second—On account of the absence of granulation formation upon the pulmonic pleura as occurs in cases of chronic inflammation in the pleural sac.

Third—The inability of the parietal pleura to approach the visceral because of the rigidity of the thoracic wall.

From these pathological conditions the subject of empyema divides itself easily into those cases in which, as the result of infection, as acute pleuritis becomes a purulent one, and into those in which the disease has continued so long as to bring about the pathological changes spoken of as affecting more particularly the visceral layer of the pleura. In acute cases, before profound degenerative changes have taken place in the pleural sac, the evacuation of the pus, cleansing of the pleural cavity and subsequent thorough drainage permits the lung to expand and no serious obstacle is ordinarily offered to the cessation of the suppurative process, the union of the visceral and parietal pleura and the healing of the cavity. In the other class, that in which chronic inflammation has changed the pleural sac by the deposit and organization of the fibrinous exudate which firmly binds down the lung and prevents its expansion, a more complicated condition confronts

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the surgeon. A thick swathe with blood vessels well formed and large, prevents the lung from expanding or the thorax from approaching the lung. These are the cases in which either the condition has not been recog nized for months or in which but very imperfect provision for the escape of the inflammatory products has been made when first the condition was diagnosticated.

From the pathological conditions described, it would be useless to consider any other treatment of pyo thorax than the surgical one. Internal medication, so far as counteracting the constitutional symptoms produced by the local condition is concerned, is, of course, of the utmost importance and should not be overlooked. But the administration of drugs intended to absorb a collection of pus in the pleural cavity, the administration of diuretics and diaphoretics for the purpose of eliminating it through the emunctories is sure to be followed by disappointment and much valuable time is lost during their trial.

It can not be my intention on this occasion to discuss the field of usefulness which aspiration covers as a means for the cure of an empyema. In children I have occasionally seen a cure accomplished by aspiration, but this has been the exception. It has succeeded only in acute cases with a rapidly formed purulent effusion.

I would lay it down as an axiom in the treatment of empyema that once the diagnosis established and the group of symptoms which points to its existence are plain and unmistakable, *it is the duty of the physician to convince himself by palpation and by ocular inspection of the condition of the pleura* before he decides upon the course which he is to pursue in the treatment.

The treatment to be instituted in a case of empyema will, therefore, depend upon the condition of the pleura and the lung as the surgeon finds it after making the primary opening which permits of the escape of the purulent collection.

For the purposes of this investigation, an incision in an intercostal space will in the majority of cases not be sufficient, nor will it answer the purposes of evacuation, cleansing and drainage. An opening sufficiently large and which will remain patulous can be obtained only by the excision of a portion of a rib. The rib selected is usually the 6th or 7th, because after the evacuation of the purulent effusion the diaphragm, which has been pressed downwards by the fluid, ascends to its normal position and will occlude an opening made through ribs lower than these, thereby interfering with drainage and irrigation. The anterior axillary line is the preferable location at which to make the excision. The operation itself is comparatively a simple one and can, in many instances, be performed without the use of a general anesthetic or the cutaneous incision can he made after a few whiffs of chloroform have been taken. An incision is made over the center of a rib, and after its periosteum has been divided in a longitudinal direction to the extent of two or three inches, the longitudinal incision is flanked at either end by a transverse one and then with the blunt periosteal elevator the enveloping membrane is readily stripped off and the rib made to ride over the instrument. A small metacarpal saw or a pair of strong forceps now readily divides the rib at one end, the elevator having been pushed along the under surface of the rib to the other where it is divided; but a short time is sufficient to remove the rib without having opened the pleural sac or without injury to the intercostal arteries. The pleural cavity is now opened to the extent of the excised portion of the rib, the pus permitted to escape and through a sufficiently large opening the interior of the pleural sac can be readily explored by inspection and palpation.

If the case is a recent one, the lung will not be found bound down, as a rule, but as soon as the pus and fibrinous material have escaped, it will begin to expand at once or within a few days. In these cases it will suffice to attach the parietal pleura to the skin of the chest and insert for purposes of drainage, after the pleural sac has been thoroughly evacuated, at first a good sized strip of iodoform gauze and subse quently a rubber drainage tube, the walls of which have been transfixed by safety pins to prevent the escape of the tube into the pleural sac.

The procedure is not near so simple when the collection of pus is of longer standing and when changes have been wrought in the parietal as well as in the visceral pleura. A fibrinous deposit binds down the lung into the cul-de-sac and prevents its expansion after the pressure upon its surface has been removed. In these cases the excision of a portion of one rib does not suffice except for purposes of exploration. The cavity partakes much more of the character of an abscess and the opening into it must be sufficiently large to allow free access to the compressed lung and its fibrinous covering as well as to all portions of the pleural sac. Dependent upon the development of the exudate and the readiness with which it can be removed mechanically from the pleura lining the chest cavity as well as from the visceral layer will be the number of ribs to be removed. Usually three or four excised ribs furnish an easy channel through which the manipulations in the interior of the chest can be carried out.

I do not wish it understood as though I advocated stripping of the membrane from the chest wall and from the surface of the pleura but I have in a number of instances cautiously removed this organized deposit desisting in my efforts when hemorrhage occurred and covering the bleeding surfaces as well as the remaining exudate with iodoform gauze, with the gratifying result of having it subsequently absorbed and seeing the lung expand.

There is a third class of cases, chronic in their course, in which both the visceral and the parietal pleura have undergone such changes as to make it impossible for healthy granulations to appear upon their surfaces or for the lung to expand. I have seen the pleura thickened so that it measured half an inch. Clearly these are the cases in which the rigid thoracic wall and the carnified lung can not approach each other except when

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they are mechanically assisted. These are the cases in which portions of the thoracic wall corresponding in extent to the size of the cavity are removed—Estlander's operation, so called. Portions of the second, third, fourth, fifth or sixth ribs, as the case may be, are removed and the soft parts permitted to drop into the cavity for the purpose of permitting it to become adherent by their pleural lining to the visceral layer of the same membrane. Whether the excision of only the osseous portion of the thoracic wall is all sufficient, I can not answer from my personal experience. In the cases upon which I have operated the condition of the parietal pleura was such that I felt it would not become sufficiently softened and furnish granulations if I allowed it to remain. I have therefore removed almost as much of the soft structures (I refer to the pleura and intercostal muscular tissues and not to the skin) as I did of the bony frame work. There is, of course, a field for this procedure and I have no doubt in those cases in which the pleural thickening is not such as to prevent it from yielding form the proper sphere for this modification of the procedure. After the excision of a portion of the thoracic wall, the remaining cavity is packed with iodoform gauze and treated as a large abscess cavity would be under other circumstances. After immobilizing the chest with abundant absorbing materials, the amount of the secretions and the thermometer should form our guide as to the frequency with which the packing should be removed and the dressings changed.

The general condition of the patient should not be neglected. How much gymnastic exercises of the lung by the spirometer will accomplish for the distending of the lung is a matter to be determined in each individual case.

In conclusion I would sum up the treatment of pyo thorax in the following propositions:

First—Determine the presence and character of the effusion by the use of the needle.

Second—Excise a portion of rib sufficiently large to permit inspection and palpation of the pleural sac.

Third—In acute cases, before changes in the pleura occur continued drainage through this opening will suffice to establish a cure.

Fourth—Dependent upon the changes produced in the pleural membrane will be the extent of the thoracic wall which should be excised.

The United Society of Christian Endeavor and the National Young People's Christian Union will hold their Fourteenth International Convention at Boston, July 10 to 14, 1895. The Wabash Railroad has reduced the rate to one first-class fare for the round trip from all stations to Boston for this occasion. For maps of route and guide to Boston write to

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EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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The Habitual Use of Nerve Sedatives and Stimulants.

The Royal Commission for the investigation of the use of opium in India has furnished an almost unanimous report to the effect that the temperate use of opium in India should be viewed in the same light as the temperate use of alcohol in England; and that opium is harmful, harmless, or even beneficial, according to the measure and discretion with which it is used. At first sight this may appear as a most sweeping and unwarrantable statement, but upon close analysis the conclusion of the commission will be found more reasonable; for it is a general observation that some persons can take opiates almost daily for many years without falling victims to the opium habit, as well as others may indulge in the moderate use of alcoholic beverages without any apparent injury. But it is also a well known fact that many individuals will readily succumb to the one habit as well as the other. It can not be too much insisted upon that while certain drugs, belonging to the same category as opium, may be taken with impunity for a long period by some individuals, others are immutably doomed to mental, physical and moral ruin by becoming accustomed to their use. The habitual

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use of opium, hashish, cocaine, in fact any drug, including tobacco, which has a decided action upon the nervous system, is, like alcohol, a most dangerous custom for some individuals, while others seem to possess a natural or acquired immunity against these poisons. The higher and more complicated civilized life becomes, the greater appear the dangers of indulging in the habitual use of any of these narcotics and the more difficult does it appear to draw the line between their usefulness or the reverse to certain individuals, in other words, to determine who is benefited and who is harmed by their habitual use. Within reasonable limits, it is the duty of the State to regulate the use of similar powerful drugs and it appears as if the Royal Commission entrusted with this difficult and important matter has been somewhat lenient with regard to its final conclusion. We do not think that such a commission would be influenced by mercenary considerations, although the Indian trade in opium is a source of much revenue to England. One should think that the importance of this matter to a large nation like India would preclude such a possibility and we have no reason to doubt that the commission has very carefully and conscientiously weighed the matter before it arrived at the above decision.

It is possible that the inhabitants of India have by inheritance so accustomed themselves to the use of opium that they have gradually become artificially immunized and thus are in a measure protected against the baneful consequences of a habit which is paramount to absolute ruin in some individuals.

The question as to the tolerance of narcotics is not settled. It would seem that as a rule neuropathic individuals are the ones that most readily fall victims to the habitual use of narcotics as well as alcohol. It also appears that nations whese ancestors have been for hundreds of years accustomed to the habitual use of certain drugs or beverages possess the greatest resisting power. This, however, is, in all probability, true in cases of moderate indulgence only. The native Indians of our continent are a most striking example of the utter absence of resisting power against alcohol, while tobacco seems to be absolutely harmless to them; they seem to have acquired immunity by inheritance.

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The question of the harmful influence of the habitual use of nerve sedatives or stimulants is by no means a settled one, yet, so much is certain, that their indiscriminate use is to be condemned. To some individuals and under certain circumstances they are, as stated above, harmless or even beneficial, while they may cause the complete ruin of others. Legislation alone will never be able to successfully cope with this momentous question and the most important means of preventing the abuse of such drugs and beverages will be the education of the people as to the dangers of their indiscriminate use.

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In discussing a subject of this nature the association of ideas most naturally brings to one's mind the most detrimental treat-system, which is so much in vogue in this country. By the influence of men who may themselves be comparatively proof against the harmful effects of certain stimulants some of their friends are involuntarily, by a process of suggestion, persuaded into the acquisition of a habit, which, sooner or later, causes their complete ruin; whilst other, from some cause naturally or artificially immune, individuals go out apparently free from any deleterious effects. We say apparently; for the neurologists can tell us to what extent the nervous systems of the progeny may have to suffer on account of any kind of immoderate indulgence on the part of their ancestors.

Intoxicating Beverages Replaced by Tea and Coffee.

Medical men as well as the people in general are becoming more and more convinced of the baneful influences of excessive alcoholic indulgence. The former by exact scientific observations and the latter by experiences in life. Both, therefore, have learned from experience; and it is a sign of the times, a significant fact, that in England, a country in which the consumption of alcoholic beverages is as great, if not greater, than that of any civilized country, a steady decrease in the consumption of beer and spirits has taken place since 1876. These stimulants having principally been replaced by tea and coffee.

A record of the consumption of tobacco from 1861 up to the present time of tea, coffee, cocoa and chicory, of alcoholic beverage and of tobacco, compared with the increase of population is of much interest. The most striking feature in the purely diagrammatical return, which has been recently issued and which has been ordered by the House of Commons to be printed, is, according to the *London Lancet*, that while an enormous increase in the consumption of tea, coffee, etc., has taken place—the line illustrating this extending as a diagonal across the diagram till it reaches the top right-hand corner (1893)—there has been a steady diminution in the consumption of both beer and spirits, the lines indicating the last two being practically parallels, not only with one another, but approximately with the base of the diagram also. Between 1861 and 1862 the total consumption of tea, etc., was 120,000,000 pounds; it then steadily rose until in 1893 it stood at 265,000,000 pounds. In the same period the population increased from 28,500,000 to 38,500,000, so that, while in 1861 the consumption of tea, etc., per head was 4.38 pounds, in 1893 it was 6.90 pounds. In regard to wines and spirits, the consumption in 1861 was equal to 35,000,000 gallons, with the population at 28,500,000, and in 1893, with the population at 38,500,000, the consumption was 52,000,000 gallons, so that, per head, it was equal to 1.22 gallons in 1861 and in 1893 to 1.35 gallons, the highest record being 1.80 gallons in 1876, since which the consumption has steadily diminished.

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The consumption of beer exhibits a similar rise and fall. Thus, in 1861, the amount consumed per head was 24.8 gallons, in 1874, 34 gallons, and in 1893, 29.6 gallons, the total consumption varying from 20,000,000 gallons in 1861 to 31,000,000 gallons in 1876, and 32,000,000 gallons in 1893, the population having increased 10,000,000. Coming to tobacco, in 1861, when the duty was 3s 1.8d per pound, the total consumption was 34,000,000 pounds, being equal to the use per head of 19¼ ounces; in 1863 the duty on cigars was reduced from 9s 5 4d to 5s per pound, and the consumption then rose to 21½ ounces in 1865, to 23 ounces in 1877. In the following year—1878—an increase of 4d per pound on all tobacco was made, and an extra 2d per pound on cigars in 1879, with the result that after that date the consumption fell to 22½ ounces. From this time it gradually recovered, till 1887, when the duty on tobacco being reduced 4d per pound and on cigars 6d per pound, the consumption quickly rose till it attained to 26 ounces per head of the population in 1893. The total consumption in 1893 was 62,000,000, while in 1861 it was 34,000,000 pounds—*i.e.*, an increase of 28,000,000 pounds for increase in the population of 10,000,000. To sum up, this interesting return shows that there is a decided diminution in the demand for intoxicating stimulants, while there is a very considerable increase in the demand for non-intoxicating stimulants principally tea and coffee.

BOOK REVIEWS

Relations of Diseases of the Eye to General Diseases. By MAX KNIES, M.D., Professor Extraordinary at the University of Freiling. Forming a Supplementary Volume to Every Manual and Text Book of Practical Medicine and Ophthalmology. Edited by HENRY D. NOYES, A.M., M.D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College; Executive Surgeon to the New York Eye and Ear Infirmary; Recently President of the American Ophthalmological Society; New York State Medical Society; Member of the American Medical Association, etc. 1895. [New York: Wm. Wood & Co. St. Louis: J. H. Chambers & Co.

Apparently insignificant eye symptoms sometimes lead to important deductions concerning the origin of some diseases, and affections of the eye often possess great significance regarding the diagnosis and interpretation of diseases of other organs. The idea of writing a book on the relations of eye diseases to general diseases is therefore a very happy one and will be especially welcomed by general practitioners. The book before us deals principally with subjects of most practical import and was not intended to exhaust the subject for fear of its becoming unwieldly and unacceptable. The work contains nine chapters of which that on the nervous system is naturally the most voluminous one, covering 244 pages. To the infectious diseases are alloted 100 pages, while the skin, digestive organs, respiratory, circulatory, urinary and sexual organs and constitutional diseases take up 106 pages of the book. The editor in his preface very correctly states that "the alliances between the eye and the rest of the body are so admirably traced that it will be hard to decide, upon whom the larger debt of obligation to the painstaking author will rest, whether upon the general physician or upon the ophthalmologist." The book will be found of the greatest service by every practitioner and student.

Practical Uranalysis and Urinary Diagnosis: A Manual for the Use of Physicians, Surgeons and Students. By CHARLES W. PURDY, M.D., Queen's University; Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Urinology and Urinary Diagnosis at the Chicago Post-Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys;" also of "Diabetes: Its Causes, Symptoms and Treatment." With Numerous Illustrations, including Photo-Engravings and Colored Plates. In one Crown Octavo volume, 360 pages, in Extra Cloth, $2.50 net. [Philadelphia: The F. A. Davis Co. St. Louis: J. H. Chambers & Co.

In this admirable work the author furnishes the student, physician and surgeon in one moderate-sized volume, the essential features of our knowledge of the urine and urinary diagnosis in a very systematic, practical and concise form. The book, in every respect, is up to date. Its author has contributed some original matter and methods which will prove to be an advance in certain practical departments of the subject. An appendix has been added upon the subject of urinary examinations for life insurance. The print and illustrations are good. The book will be found of much value by both, practitioner and student.

Russia's Empress Gains Strength.—The producers of "Mariani Wine" (Vin Mariani) should, according to report, soon have a splendid market in Russia for their nerve and brain tonic, as the Dowager Empress has, at the suggestion of the Princess of Wales, drunk it since the death of her consort, with the most remarkable and beneficial results. It seems that Her Majesty is one of the many delicate persons with whom stimulating drugs like quinine, iron and Peruvian bark disagree, but such is not the case with the wine tonic referred to. It is well known that the Princess of Wales also derived increased strength of brains and nerves from it during her last great trials. Moreover, in consequence of the benefits obtained by the Empress, a great demand for this tonic has sprung up among ladies of Russian aristocracy suffering from "nerves."—*The Court Journal*, London, Jan. 12, 1895.

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MEDICAL SOCIETIES

American Academy of Medicine.

The American Academy of Medicine held its annual meeting, under the Presidency of Dr. J. McFadden Gaston, of Atlanta, in Baltimore, on May 4 and 6. Dr. J. E. Valk, of Philadelphia, read a paper on the "Limits of a Physician's Duty to the Dependent Classes." He said that the physician should remember that he is a man and a citizen, as well as a pathologist and therapeutist. He held that physicians should not be expected to give their services to public institutions, for they were already taxed for their support, and if they served free they made a double contribution. He also advocated a reform of the dispensary abuse, which he thought might be brought about by the very growth of the evil, the enormity of which would eventually lead to its destruction by an awakened public and professional sentiment. Dr. W. L. Estes, of South Bethleham, Pa., presented a communication on "Hospital Management," in which he advanced the very sound doctrine that of the two boards connected with a hospital the medical board should be higher and more authoritative in its action than the lay board of managers. The superintendent, who is a connecting link in this dual management, is usually a layman, but he should be a physician. Dr. W. L. Pyle, of Washington, presented a "Plan for an Emergency Hospital." Such a hospital, he said, should be easily accessible, on a street of some width, in convenient communication with a police station. There should be a sheltered driveway for the ambulance, communicating by large doors with a large, airy room, kept constantly in readiness for any operative procedure. An emergency ward should adjoin this room, and some padded wards for alcoholics, the acutely insane, etc., should be found on this floor. The administration should belong to the municipal authorities, having an advisory board of physicians and surgeons. Dr. Emma B. Culbertson, of Boston, read a paper on the reform of the dispensary abuse, giving an outline of the plan followed by the New England Hospital for women, in which those applying for relief were investigated by the "United Charities." Dr. George M. Gould presented a communication on "Hospitalism," in which he defined the dispensary disease, or hospitalism, as "a contagious, epidemic, ingravescent neurosis of civilization, limited as regards time to the present, and as regards geographic distribution to the urban population. It attacks three considerable classes—the professional philanthropist, the commercial physician, and the social sponge." He detailed the symptoms of the disease as manifested in the endowing class, the patient, and the physician. There is no specific remedy for the affection and we must employ every means at our hand that may promise a slight degree of relief. The prognosis is very grave, and the cure of the disease can not be looked for in our day. Dr. Bayard Holmes, of Chicago, also read a paper on medical charities, in which he said that the endowment of charities is inexpedient. The medical profession is in great measure to blame for what it has to endure from the lay management of charitable institutions. Dr. Woods Hutchinson, of Desmoines, read a paper on the "Economics of the Social evil." He thought the youth of the land should be properly taught the dangers of fornication with prostitutes, and said that if then they chose to incur the dangers it was at their own risk, and society would be well rid of them when they were exterminated by the diseases which they brought upon themselves.

The first paper on Monday, May 6, was by Dr. Delancy Rochester, of Buffalo, upon the "Proper Teaching of Physiology in Public Schools as a Means of Preventing Intemperance and Disease." The speaker advocated the teaching in schools of the physiology of the sexual organs as well as that of digestion. This could be done without going into unnecessary detail. Children will learn such things for themselves, and it is better that they should be taught them seriously. The evils of the abuse of alcohol and tobacco should also be pointed out. The annual address of the President was read by Dr. J. McFadden Gaston, of Atlanta, who took for his title "Rudimentary Preparation Compared with Higher Education for Specialties in Medicine and Surgery." In the evolution of specialism, he said, it may be anticipated that little or nothing will be left for the occupation of the general practitioner, and it becomes a grave question as to the final outgrowth of this division of labor to such an extreme degree. He held that the role of the general practitioner is essential for the advancement of medicine and surgery. It will prove disastrous to the best interests of the medical profession if all practical work is parcelled out into these subdivisions. The curriculum of instruction in medical schools should be maintained so as to qualify their graduates for entering upon general practice in medicine and surgery. There should not be any provision in the graded courses of three or four years for turning out specialties, but the preparation for a specialty should not begin until after graduation and a certain exercise in general practice.

Dr. E. F. Wilson, of Columbus, Ohio., read a paper entitled, "Is the Recitation Method of Teaching a Success in Medical Colleges?" He answered this question in the affirmative, claiming as advantages for the recitation method:

1. The students do more and better work.

2. By using recent text-books the students receive the latest and best teaching of the master-minds of the profession.

3. There is no break in the method of study in the change from the college to the medical school.

4. A better preliminary education will be required.

5. It will, in time, cause the medical course to be regarded as a post-graduate course.

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6. It enables the student to ask questions and thus have obscure points made clear.

Papers were also read by Dr. Millard, of St. Paul, on "A Plea for Efficient Medical Legislation;" by Dr. Peterson, of Grand Rapids, on "The Need of More Medical Reference Libraries, and the Way in Which They Can be Established;" and by Dr. Grosvenor, of Buffalo, on "What Shall We Do with Our Alcoholic Inebriate?"

The election of officers for the ensuing year resulted in the choice of the following:

President—Henry M. Hurd, M.D , Superintendent of Johns Hopkins Hospital, Baltimore.

Vice-Presidents—Woods Hutchinson, M.D., of Des Moines, Ia.; John B. Roberts, M.D., of Philadelphia; Emma B. Culbertson, M.D., of Boston; W. F. Southard, M.D., of San Francisco.

Secretary and Treasurer—Charles McIntire, M.D., of Easton, Pa.

Assistant Secretary—Edgar Moore Green, M.D., of Easton, Pa. —*Medical Record.*

Royal Medical and Chirurgical Society of Great Britain.

Dr. Jonathan Hutchinson, in opening a debate on the subject of "Affections of the Nervous System in the Secondary Stages of Syphilis," drew the following conclusions, which he offered as the basis for discussion (*Lancet*):

1. The nervous system might suffer in very various ways during the secondary period of syphilis, and it was very important to recognize this fact, since the affections were usually acute and destructive unless prompt treatment was adopted.

2 It was very exceptional that any disease of the nervous system occurred earlier than the sixth month.

3. Many, perhaps most, of the affections of the nervous system in the secondary period were secondary to disease of the blood-vessels. Under this head were included extensive implications of the minute arteries of the pia mater, whether of the brain or cord

4. Amongst the diseases which were probably primarily of the nerve structures themselves we might recognize (*a*) acute affections of the eye and ear, of the latter sometimes attended by paralysis of the portio dura; (*b*) acute forms of polyneuritis, usually symmetrical and transitory; (*c*) a peculiar and very definite form of paraplegia due to transverse myelitis; (*d*) certain rare and peculiar forms of hemianesthesia.

5. It was not disputed that at much later periods in the course of syphilis affections closely similar to the above might occur; but it was believed that when they did so they were much slower in onset, less severe and more chronic in progress, and less amenable to specific treatment.

6. The prognosis of these affections was good up to a certain point if efficient treatment was commenced early.

7. It was believed that these early affections of the nervous system in syphilis occurred almost invariably in those in whom the treatment in the early stage had been neglected.

Dr. Gowers only knew, from personal observation, of syphilitic disease of the larger arteries of the brain. He knew of no disease of the arteries of the spinal cord that could be called syphilitic. With regard to syphilis of the smaller arteries of the brain, there was an observation by Dr. Barlow which established the fact that there might be a syphilitic disease of the minute arteries scattered throughout the whole substance of the brain. The disease of the large arteries occurred usually during the first seven or eight years after the acquisition of syphilis, and was absolutely identical in its characters and effects and distribution from first to last, affecting the middle cerebral and basilar arteries by preference, and producing the same effects at all periods. It could not be distinguished in any case as secondary or as tertiary by naked eye or microscopical evidence, though the aspect was naturally changed when the patient had been subjected to a course of antisyphilitic treatment. A fact of practical importance with which he had been much impressed was that the dose of iodide of potassium as usually given—say, 15 grains (1 gramme) three times a day—after two or three months ceased to influence the disease, which again became aggressive. Though the microbe of syphilis had not been discovered, it was necessary, in order to obtain a real grasp of the disease, to conceive it to be due to a specific organism. Besides the arterial disease there was the gumma, which was certainly of less frequent occurrence than was the arterial disease during twelve years after the primary infection. The two principal predisposing causes appeared to him to be youth (all his cases had occurred in young people, chiefly between 18 and 29 years), and injury to the head, whether received previously or subsequently to infection. Other predisposing causes were neurotic inheritance, sexual and alcoholic excesses, and undue mental strain. The chief differences between early and late nerve syphilis appeared to lie neither in the nature of the lesions (for arteries and syphiloma occurred both early and late) nor in their seat, as no portion of the nervous system appeared to be safe from the inroads of the virus at either period. Early nerve troubles were, however, more acute in their appearance and more amenable to specific treatment, while tertiary affections had a slower and more insidious course, with a tendency to end in general paralysis. Nervous affections, after the acute exanthemata, such as paralysis, the delirium of collapse, etc., might appear at a still earlier period,—that is, before or immediately after defervescence,—while a considerable interval between the cessation of the fever and the appearance of nerve troubles was exceptional. Influenza stood very much in the same line with the eruptive fevers in this respect. He had seen a few cases of what he might call tertiary affections after influenza, but in no case had the interval between their appearance and the primary

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attack exceeded six months; while insanity, general paralysis, encephalitis, myelitis, and neuritis had frequently followed the attack at a very short notice.

Dr. Althaus spoke strongly on the necessity of the full use of mercury in the cases under consideration. He preferred the hypodermatic use of the metal and injected the soluble perchloride, which was readily absorbed and eliminated, in acute and threatening cases; and an insoluble preparation, where the mercury was rubbed up with carbolic oil and lanolin, in the more chronic forms of the disease. The latter preparation was slowly absorbed and eliminated, and need only be injected once a week, while the perchloride should be injected daily, for some time. No other remedy could be relied upon with confidence in the gravest emergencies of this kind, although even mercury was not infallible.

Sir William Broadbent did not think that morbid anatomy could ever have convinced us that the manifestations of the third stage of syphilis belonged to the same disease and were produced by the same poison as the manifestations of the first and second periods; and, if we extended our definition of the tertiary stage to include locomotor ataxy and general paralysis of the insane, pathological anatomy would have been still more at fault. He agreed with Dr. Gowers that the ultimate clue to the diversities in this disease would eventually be found by an inquiry into the causative microbe or microbes and their toxins. The secondary lesions were characterized by their symmetry; the tertiary by their want of simple grouping. The secondary lesions were caused by a disturbance of nutrition on the side of the blood; the tertiary lesions, on the other hand, were tissue changes initiated by blood changes, but which had ceased to have any immediate relation to blood changes. He confessed that, from his early work, he had been of the opinion that the effects of secondary syphilis were manifested upon the skin, mucous membranes, and blood-vessels, and were seldom of a destructive character. The tertiary lesions, besides involving the tissues in these situations, also involved the deep seated viscera and nervous system. The late manifestations of syphilis were attributed either to the results of damage to the vessels done during the secondary period or to gummatous growths. Hence, when he came across paraplegia during the first two years of syphilis, he had been in the habit of looking upon it as a precocious tertiary manifestation. He referred to the case of a patient, aged 24 years, who came under treatment six months after the chancre signs of paraplegia began to show themselves. Another man, aged 40 years, came under treatment with definite signs of paresis; he had acquired syphilis a year previously. The cases were clearly due to the effects of secondary syphilis upon the spinal cord, and he regarded it as really a myelitis, and not a primary affection of the vessels. He had seen epilepsy in the second stage of syphilis which had yielded to treatment, and there was no recurrence after twenty years. Certain cases of spinal meningitis he had also attributed to secondary syphilis. In one such case there were pain and ataxic gait in the legs and rapid wasting of the muscles in the arms; the meningitis seemed to have affected the posterior aspect of the cord at the lower part and the anterior aspect of the cord at the upper part. Recently he had seen two cases in which a zone of anesthesia rapidly developed.

To one case of gumma there were three or four of arterial disease produced by syphilis. Gummata always sprang from the membranes, never from the brain substance or from the substance of the spinal cord, and when present in the cerebral substance they could always be traced to some fold of the membranes. It was probable that a similar inflammation of the membranes was the origin of the indurated form of pachymeningitis sometimes met with in the cord. Small gummatous growths had also been found upon the nerves. Though locomotor ataxy was a sequel of syphilis in such a vast proportion of cases that there must be a causal relationship between them, yet the ataxy could not be cured by antisyphilitic treatment. If locomotor ataxy were compared with the effects of alcohol upon nerves or of other chemical poisons, such as arsenic and lead, or those produced by diphtheria, there could be no doubt that the ataxy was the result of a chemical poison left behind by syphilis. The condition of inflammation might be associated with gummatous deposit in varying degree, and, the more acute the condition, the more would the inflammatory phenomena preponderate. In the cases of acute cerebral meningitis which were sometimes checked or ended by mercury the inflammation was very acute, and there was little or no time for the production of characteristic gummatous tissue. He doubted at the present time even more than he did in 1870—when he published his work on "The Diagnosis of Diseases of the Spinal Cord"—whether syphilitic arterial disease played any part in the production of acute spinal myelitis. The fact that acute transverse myelitis was frequent in the subjects of constitutional syphilis had long been a familiar one; but there was also this conspicuous fact about these cases, as about all cases in which inflammation preponderated over tissue production, that, in proportion as this was the case, antisyphilitic treatment failed. Who that had kept in touch with the therapeutics of the past could have any doubt regarding the influence of mercury upon simple inflammation, and who was there who could place any confidence whatever in mercury as a test of the syphilitic nature or otherwise of acute inflammation? These cases, treated as energetically and promptly as possible, ran a course absolutely indistinguishable in every case from that of cases of transverse myelitis in which syphilis could be absolutely excluded. The syphilitic and non-syphilitic cases ran a parallel course. The same applied to arterial disease of the brain. It was only in the cases in which there was not the tendency to recovery which all acute processes involved that we could place any confidence in the significance of the antisyphilitic treatment. He quoted the case of

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a patient, who had an indurated cellulitis in the region of the spine, who was not benefited by iodide of potassium, but who recovered under mercury. He found it difficult to judge whether to class this as a secondary or a tertiary lesion.

Dr. Althaus related a a case of hemiplegia which had come on eight months after infection and had been diagnosed and treated as hysterical and got steadily worse until specifically treated. Two years have been mentioned as the earliest period when specific brain-lesions would become developed; but he had himself seen a characteristic form of headache, followed presently by epileptiform seizures and hemiplegia, three months after infection; and another case in which extensive disease of the cerebral arteries, with softening of the brain tissue and other characteristic nerve-lesions, had developed in the same period. He had met with several cases of analgesia in the secondary stage, and thought that this would be more frequently found if it were looked for. Acute multiple neuritis was no doubt sometimes the cause of the more or less general paresis with anesthesia seen in the secondary stage, but acute encephalitis, ascending myelitis, and poliomyelitis might also occur during that period. He related a case of tabes which had become acutely developed seven months after infection, the patient making a very fair recovery under specific treatment. Early neuritis of single nerves was not uncommon, and he had found that the portio dura was more apt to suffer thus early, while in the tertiary stage the third nerve was more frequently affected. He had also seen neuritis of the sixth and of the ulnar nerves four and six months after infection.

Dr Ferrier said that all neurologists looked upon syphilis as one of the most potent factors in diseases of the nervous system. The lesions might occur at any time; those which came under his notice were usually in the later stages of syphilis. He was not prepared to admit that syphilitic disease of the nervous system should be separated into a distinct—a nosological—group. Jacksonian epilepsy was frequently caused by syphilis; so were hemiplegia, hemianesthesia, and Bell's paralysis; and so also were the affections of the spinal cord, which had been recently erected into a special group by Erb. He knows of no way of distinguishing these cases from others which were not syphilitic. He quoted five cases of the gradual type described by Erb. The first was a man, aged 35 years, who developed the symptoms two years after the chancre; the second, in a man aged 44 years, began a year after the chancre; the third, in a man aged 44 years, began ten years after the chancre; the fourth, in a man aged 44 years, began six months after the chancre; and the fifth, in a man aged 31 years, began thirteen years after the chancre. He then referred to five cases of sudden acute paraplegia. The first, in a man aged 25 years, began six months after the chancre; the second, in a man aged 25 years, began eighteen years after the chancre; the third, in a man aged about 30 years, began eight years after the chancre; the fourth, in a man aged 32 years, began two years after the chancre; and the fifth, in a man, aged 23 years, began three years after the chancre. He then mentioned three other cases in which the disease was the gradual type, and in which there was no history of syphilis, the first being in a man aged 40 years, the second in a man aged 33 years, and the third in a man aged 61 years. These three last cases correspond precisely with Erb's group. Sudden paraplegia occurring in syphilitic individuals might turn out to be only the preliminary stage of a disseminated sclerosis; and he referred to two instances, both males, aged 30 and 38 years, respectively, who illustrated this point. So far as the symptomatology of the spinal lesions went, he was unable to distinguish the syphilitic from the non-syphilitic cases.

Dr. George Ogilvie quoted a number of statistics to show that the lesions of the nervous system to which Mr. Hutchinson had alluded had been recognized for more than twenty-five years as occurring in connection with syphilis, that the symptoms often came on within a few months of infection, and hence belonged to an early stage of the dyscrasia, and all alleged that the disease showed a tendency to improvement, if not to recovery. He gave a list of the single cases of nervous disease occurring early in syphilis which he had been able to collect, and he referred to a large series of figures by Fournier and others, showing that a considerable percentage of the nervous troubles ensued within a year from infection. The specific dorsal myelitis which had been described was only one of the many nervous manifestations of syphilis that might occur early, and, though the myelitis was more common in the early stage, yet it might occur also later. It had been said that these early lesions were symmetrical, but the symmetry was due to the seat of the affection; it was symmetrical because it was spinal rather than because it was secondary. The affection of the brain and of single nerves showed no tendency toward symmetry. There were two other transitory nervous symptoms often observed besides the analgesia which Mr. Hutchinson had described—an increased irritability of the superficial and deep reflexes, and an hyperemia of the optic discs; the latter was said to occur in 30 per cent of syphilitic patients. The irritability was probably to be explained by an alteration in the blood-supply of the nervous system similar to that to be witnessed in the optic disc. The analgesia, he thought, might be of hysterical origin.

Mr. Cotterell said that the primary infection might be so mild that it would escape notice, and the patient would then deny the history of syphilis. Locomotor ataxy and general paralysis were not truly placed in the tertiary stage of syphilis, but really should be regarded as forming a fourth stage.

Dr. F. J. Smith mentioned the case of a man, aged 28 years, who had suffered from a chancre eighteen months before the appearance of the symptoms. In July last he was stunned after a fall from a cart; later he developed a condition of typical paraplegia. The symptoms appeared to be due to neither a vascular nor

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gummatous change, but were probably produced by a diffuse infiltration of leucocytes. He should describe Dr. Ferrier's cases of disseminated sclerosis as typical of syphilis; certain damaged areas had gone beyond the reach of iodide of potassium and mercury, but had not been absolutely killed; in these areas a slow sclerotic change had occurred, producing the symptoms complained of.

MR. HUTCHINSON, in reply, commented on the interest of at least three observations to the effect, that, in cases of paraplegia in which sensation was not lost, bedsores, nevertheless, developed. One outcome of the debate was a strong emphasis of the fact that a majority of the cases of the nervous manifestations of syphilis did occur in the early period. He knew that many such cases had been recorded, but they had nearly all been described as precocious tertiary manifestations. If we attempt a natural definition of syphilis we should describe the second stage as the blood-stage, during which the patient should not marry, as he was still liable to infect his wife and his offspring. If this definition were accepted, then what Fournier and others regarded as manifestations of a tertiary stage we would call secondary, or, at any rate, "blood-stage" cases. Dr. Gowers appeared to regard the tertiary phenomena as due to a chemical poison left behind by the syphilitic microbe. He himself regarded the tertiary phenomena as local phenomena due to an implication of cell-structures and leading to cell growth; but this did not imply the existence of a poison still circulating in the blood; he did not believe that the blood was infected in any way in tertiary syphilis. Dr. Gowers had implied that the syphilitic remedies were not so useful in the purely-inflammatory manifestations of syphilis; but, in the inflammatory affections of the skin, mercury certainly was very useful. Dr. Ferrier's more typical cases of acute paraplegia appeared to occur during the early period of syphilis. The advisability of forming a special group of these syphilitic nervous manifestations has been doubted; there was no doubt that they were not absolutely special to syphilis, for he had often held that syphilis imitated, but did not create; yet, nevertheless, as with skin syphilitic troubles, there were peculiarities about them which enabled skilled observers to say that they were probably syphilitic, and for that reason they were worthy of being put in a separate class. He had seen very few cases of acute paraplegia which were non-syphilitic and which recovered.

Frederick Stearns & Co., of Detroit, Mich., will be pleased to mail samples of the fresh (undried) true African Kola nut to any physician, writing them, which sample may be planted, providing you mention the MEDICAL REVIEW.

The Price of Dr. Adolf Alt's book—"A Treatise on Ophthalmology, for the General Practitioner," has been reduced to $2 50 from $3.50. See advertisement on page 11.

ABSTRACTS

MEDICINE.

Kitasato's Bacillus of the Bubonic Plague.

Dr. R. H. Freund (*Pacific Druggist and Physician*, March, 1895) has an excellent account of the dramatic incidents which led to the discovery of this parasite. The disease which ravaged Hong Kong last year was early recognized to be the same malady which visited London just before the great fire, and which has occasionally ravaged the shores of the Mediterranean:

The plague in Canton assumed epidemic form early in March. It came there, according to one account, from Meng-tzu, and according to another, from Pak-hoi. In all probability it came from both, and finding Canton in good condition for its reception, spread from the various centers in which it first found a foothold. Both of these cities are situated in the unhealthy part of China. In these districts the plague has been an annual visitor from time immemorial. Some years its ravages are slight; in others it carries away a quarter or even a third of the population. The climate is hot the year through, and intensely hot in summer. There is a large rainfall, a heavy dew, and an alarming amount of atmospheric moisture. The land is chiefly alluvial, and in many districts marshy. Decaying organic matter constitutes a large portion of the soil. The water supply is exceedingly bad, the solids frequently running as high as 1,500 grains to the gallon. The people and the country are miserably poor, and the poverty and suffering are increased by the taxation and other exactions of of the governing classes. Heretofore this part of China had but little communication with other portions of the empire and the outside world. Since, however, the French took Tonquin, they endeavored to push commerce into this district, and to offset this attempt the Chinese officials have opened new channels from it into the provinces of Quangtung and Yunnan. As a result, communication has become safe and cheap in every direction, and it is probable that the plague will hereafter be a regular visitor to Canton each year.

The disease spread rapidly, and before the end of March was in every part of Honam and Fatshau, the giant suburbs of Canton, as well as in the city itself. Early in May it made its appearance in Hong-Kong—seventy miles down the river from Canton; the exact date is fixed at May 2, when it was discovered, so far as the knowledge of the Europeans is concerned, by an editor of a local paper. It had been known for some time to the Chinese, but they, with their customary apathy towards disease and death, never reported it to the English officials. On May 3 the editor announced the fact in his columns, and in the next few days the other newspapers made the matter a special item, but it

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was not until the 17th that the government of Hong Kong took any notice of the plague. The plague was spreading all the while. The official record was ten and twelve cases a day, while the deaths among the poorest class of coolies in Hong Kong and its suburbs must have been three times as many. A feeling of grave uneasiness became manifest, and an exodus of both Europeans and Mongolians began, which soon attained enormous proportions. On May 1 the estimated population of the city and suburbs was about 230,000; on July 1 it was scarcely 100,000.

It is impossible to learn how many deaths were caused by the epidemic. The official record shows about 2,600, while the plague cemetery had about 3,000 graves. This does not include those who died in the Laicho-Kok hospital on Chinese territory on the other side of Kong Kong harbor, nor the thousands of sick who went or were carried to Canton and there perished, the hundreds who were seized with the pestilence and tried to escape by steamer and junk, but died on board, and another multitude who fell victims to the malady in the suburbs and surrounding towns and cities. The lowest estimate is 4,000 deaths, while the highest is 10,000.

In Canton the death-rate rose steadily until in April it reached 1,000 a day. Several days it went as high as 2,000 a day. In May it began to decline, its virulence grew less, and the death-rate fell rapidly. In July there were 50 cases daily, and at the end of the month 20 or 25—all or nearly all sporadic cases. Besides appearing in Hong Kong, the epidemic spread to other cities. It did not seem to follow the roads, but the rivers, and appeared in various towns on the pearl river in March and April.

In Hong Kong, luckily for the community, the citizens came forward and formed themselves in commit tees of all sorts, which worked early and late. The soldiers in the garrison volunteered their services, and toiled like heroes. The press and medical faculty left nothing undone to discover every plague-spot, and to teach the public how and where to disinfect. Almost all classes were represented in this movement. In one "whitewash brigade" was an editor, a mining engineer, a banker, a dry-goods clerk, a chief mate, and some soldiers. The labor done was enormous. The volunteer and official squads visited every infected house, removed the sick, dying, and dead, and took out all the furniture and rubbish and burned them in huge bonfires. By the 1st of July every infected house had been disinfected.

In Canton there was no inspection; there was no cleaning; there was no disinfection; there was no exodus of the people; there was no flushing of the sewers, because there were no sewers to flush; there was no treatment of the disease. The only action to stop the plague was to form processions through the streets, beat tomtoms, and call upon the deities to arrest the Black Death. The plague stopped at Canton the same time that it stopped at Hong Kong. Can any man learned in medicine or bacteriology explain that fact? No unusual climatic condition was the cause of stopping the disease. Suddenly the plague ceased, and it ceased at the same time in overcrowded, pestilential Canton, and in the cleaned, purified and deserted Hong Kong. An intelligent Chinaman wrote a letter to a publication in Hong Kong, reciting these facts, and asking the English to tell him the benefits of their sanitation, their drainage, their disinfection, over the Chinese gong-beating. The same question will be asked all over the world.

The world is indebted to savants of Japan for the first scientific knowledge of the disease that in the fourteenth century ravaged Asia and Europe, in the seventeenth century almost depopulated London, and then seemed to vanish from the earth. But, as stated before, in China, however, the bubonic plague or Black Death has not been wholly extinct for centuries, but until this year never left the Yunnan province to attack Canton and Hong Kong. That Japan should give the first accurate knowledge of the plague, is an expression of the vigor and enlightenment of that nation. The Imperial Japanese Government sent a scientific commission to Hong Kong "purely in the interests of science and in the cause of humanity," in order to study the plague, especially as regards its bacteriological character and its pathological and clinical features.

This commission consisted of six medical gentlemen: Professor Kitasato, for eleven years chief assistant to Professor Koch, holding the rank of Royal Professor in the University of Berlin (now Professor of Bacteriology in the Imperial University of Tokio); Dr. Aoyama, Professor of Clinical Medicine at the University of Tokio; Dr. Ishigama, Chief of the Medical Corps of the Navy; Drs. Miyamoto, Kioshita, Takadi, and Tokada. These gentlemen established their laboratory in the Kenedy Town Hospital—one of the plague establishments—and there commenced their work. Unfortunately, Professor Aoyama cut himself while making a post-mortem examination, and became inoculated with the pest; two of the others contracted the disease in the normal way; so that three, at almost the outset of their work, were rendered "*hors de combat*," and spent the greater part of their time at the Hygeia as patients. Professor Kitasato, however, escaped and proceeded with his experiments and investigations, the result of which he has made known in a preliminary report.

Professor Kitasato and Professor Aoyama arrived at Hong Kong June 12, 1894, and commenced work at the Kennedy Town Hospital (one of the plague establishments) June 14. On that day Professor Kitasato, at a post mortem performed by Professor Aoyama, found numerous bacilli in the bubo (in this case a swelling of the inguinal glands), in the blood of the heart, in the lungs, liver, spleen, etc. As the post-mortem had been made eleven hours after death, and doubts arose as to the true significance of the bacilli, cultivations were made and a mouse inoculated from a small piece of the spleen. On the same day, with all due precautions, some blood from the finger-tips of a patient suffering with the plague (temperature 40.5° C., swelling of the

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axillary glands, etc.) was taken, and capsulated bacilli were found, the poles of which stained much more deeply with anilin dyes than did the middle part, giving them a great likeness to the bacilli of chicken cholera (*Bacillus cholera galinarum*). On the next day all the serum cultivations, which were prepared from the different organs of the body and of blood from the finger tips, showed a growth of micro organisms, which, under the microscope, were not to be distinguished from those which were found in the blood at the first post mortem examination. The bacilli differed only by being a little longer and staining easier than those taken from the blood. With these cultivations, mice, guinea-pigs, rabbits and pigeons were subcutaneously inoculated.

The mice died in two days; at the post-mortem, edema was found around the place of inoculation, and the same bacilli in the blood, in the internal organs, and in the edematous part around the place of inoculation. All animals inoculated with the cultivations (pigeons excepted) died after periods extending from one to four days.—*Medicine.*

Rational Therapeutics of Cholera Infantum.—No strict rules can be given for the treatment of disease. It is for this reason that so many physicians say we do not treat a disease, but we treat an individual. True enough we treat the individual, but what we have most of all to consider is the disease. The individual will dictate us alterations and modifications in our treat ment.

A general plan of treatment may be outlined, how ever, and I will try to do so in regard to one of the most fatal diseases of babybood—cholera infantum. There is a certain philosophy in therapeutics which I would frame in the three following rules:

1. Remove if possible the disturbing causes.
2. Treat symptoms which *per se* are liable to endanger the life of the patient.
3. Sustain vitality.

As said before, the therapeutics which is based upon the etiology and pathology of a given case is the only one to be employed.

Now, the etiology of cholera infantum is not so obscure as asserted by a good many authors. Whether or not of microbic origin, one thing is sure—it is due to a chemical decomposition of food, causing an inflammatory condition of the digestive and alimentary canal.

Clinical experience, furthermore, shows that this disease is of a grave character, producing death in a large proportion. Heat *per se* is not the immediate cause of this disease, but it influences its course considerably. Therefore, gastric or intestinal disturbances in summer demand a closer attention than those which occur during the colder season. Cholera infantum is a disease met even in the palaces of the rich, although not so often as in the tenement houses of the poor, which fact proves again that bad air, filth and lack of ventilation are also of a predisposing influence, as well as an obstacle to a quick cure. The mortality in the tenement houses is larger than that of the richer parts.

If we consider the aforesaid, we shall first of all, as regards the treatment of this disease, have to restrict diet.

As soon as called to a case of cholera infantum, prohibit for the first day any food whatever. Mothers have no right to nurse the little patient either. Strict instructions must be given in that direction, because the timid mothers are often inclined to quiet the crying babies by putting them to the breast.

Remedies are of very little value. Beginning with calomel, salol, and all the newer antiseptics, finishing with subnitrate of bismuth—they have all proved a failure, for none of them work quickly enough.

The treatment as outlined by Dr. Elmer Lee, of Chicago, in his cases of typhoid fever, proved a success in my hands during last summer, and under this treatment I have lost only one patient out of twenty-three, while the monuments of my skill exercised during the year 1893 are decorating the cemeteries of the State of Connecticut.

So far as I knew, the best antiseptic (which has also a strong tendency to reduce local inflammation) was peroxide of hydrogen (medicinal) until hydrozone was used by me. Hydrozone being twice as strong as Marchand's peroxide of hydrogen (for economical reasons), the latter drug is preferred by me. This remedy can be administered internally as well as externally.

I add a tablespoonful of hydrozone to a pint of water for washing out the stomach. The vomiting ceases after the first washing as a rule. If necessary, this procedure can be repeated. If the vital power of the little patient is not too low it can produce no harm. But in every case, no matter how far advanced, I do not omit an irrigation of the bowels, for which purpose I use a soft rubber catheter attached to a common bulb syringe. The catheter is introduced as high in the colon as possible. It is unnecessary to say that the water must first be sterilized. I do not agree with Dr. Lee in using hot soap water. On the contrary, I use cold water, and add to each quart about two ounces of hydrozone. The improvement after the first or second irrigation is marked. If necessary, these irrigations can be repeated every two hours.

Among other remedies there are only two to be employed, morphine and strychnine. Both ought to be administered hypodermically. Their indication is too well known and they are about all we need. No antipyretics should be given. If the fever is very high and if the irrigation of the bowels does not reduce it, the whole body should be washed with alcohol.

The diet for the next twenty-four hours should be very light indeed. Sweet, strong Russian tea is all I allow.

Each individual case will teach us when food can be allowed again.

Since the adoption of this mode of treatment I have met with the most remarkable success, and no honest

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practitioner should refuse it a trial.—Gustavus Blech, M.D., in *N. Y. Medical Journal.*

The Abortive Treatment of Erysipelas by Juhel Renoy's Method—Traumaticine with Ichthyol.—Renoy and Bolognesi (*Bull. Gen. de Ther.*) have reported a very interesting and extensive series of observations on the abortive treatment of erysipelas, and have obtained very remarkable results.

They say: We do not believe that any really abortive treatment of erysipelas exists—that is to say, none that gives a prompt and rapid diminution of the exanthema and of the phenomena of the general infection in all cases.

Among the treatments which give the best results is the application of ichthyol plaster, as this succeeded in more than half the cases, notably in cases of erysipelas ambulans. An abortive treatment of erysipelas exists which is not always successful, but often (in about sixty per cent of cases), and it consists of the use of ichthyol traumaticine.

The Preparation of the Traumaticine.—Fresh gutta-percha is cut up into small bits and then treated until completely dissolved by nine or ten times its weight of chloroform. This method is tedious, however. The following may be used if preferred:

A quantity of chloroform one-third in excess of the amount ordinarily required is taken (twelve to fifteen times the weight of gutta percha). It should be shaken frequently during a day and then introduced into a distilling apparatus. It is there distilled over a water-bath until the quantity of chloroform in excess has been re collected. The traumaticine thus obtained is thick, homogeneous liquid. It is colored unless the gutta-percha is very fresh. It is therefore well, if the traumaticine is to be used with a colorless substance, to pass it through animal charcoal.

Three parts of ichthyol are added to ten of the simple traumaticine. The proportion is the same for salol, lysol and carbolic acid. For sublimate, one part of sublimate to one hundred of traumaticine should be used.

The combination of traumaticine and ichthyol thus obtained is a syrupy liquid, dark brown in color, which, when applied with a brush, as directed by Professor Auspitz, of Vienna, forms a thin pellicle, sufficiently soft, but exerting, after the chloroform has evaporated, a compression. It does not produce either tension or sensation, except for a few instants at the moment of application. The patient feels a slight amount of heat or smarting sensation according to the individual sensibility, most marked in women, but supportable and evanescent.

This sensation of burning is produced by the chloroform. Its intensity varies in proportion to the carefulness with which the traumaticine has been prepared, and, where care has not been taken to remove the excess of chloroform, may even produce a burn of the first degree, which is unpleasant for a little time, but disappears entirely before the dressing is removed.

The Mode of Application of Traumaticine.—In a case of facial erysipelas which is well defined by an area of induration easily felt, it is sufficient to circumscribe the erysipelatous area, over the indurated portion or a little externally to it, with a band of traumaticine about three-quarters of an inch in width.

Great care should be taken to be certain of the limits of the disease, especially if the induration about it is not marked, as frequently occurs. This can be ascertained by the sensitiveness to pressure and pain, especially if the region affected is near the scalp. One might suppose that he had circumscribed the diseased area and then have found himself mistaken. The ears, if in the vicinity of the disease, should be carefully examined; if this has not been done a failure may result. If only the anterior surface of the ear is attacked, while the posterior portion and the scalp are free, the band of traumaticine may be passed behind the ear. If, on the other hand, the ear appears sound, but you suspect invasion, nothing prevents the passing of the band both in front and behind the ear, encircling it, to make certain of the result. In case the disease invades the scalp the head must be shaved. If the disease is unilateral, it is sometimes well, besides the treatment of the diseased areas, to surround the unaffected portion with a band of traumaticine. It at least prevents an application on the morrow. The face may present a grotesque appearance, but further than this it is without objection, and, as it cuts short the duration of the disease about one half, it is easily borne by the patient.

If the disease is on one member or upon the body, its application is easier. A girdle or bracelet is sufficient. But, since the ambulant form is more easily diffused, a wider band—an inch and a quarter to one and a half—should be applied. In applying the traumaticine care should be taken that the chloroform is entirely evaporated, or the traumaticine will become injured by contact with clothing and the results will be vitiated.

In the ambulant form the success is more difficult to obtain, and this form of treatment does not succeed so well as in ordinary facial erysipelas. On account of its greater tendency to extension the difficulties are supposedly greater and are sufficiently explanatory of these results. The first of these is the greater dimensions of the circle of traumaticine and the more frequent destruction of the barrier by movements and contact with the clothing, and also the greater difficulty of determining the true limits of the disease.

In these cases, therefore, the preparations of traumaticine employed should be fresh—that is, made of fresh, purified gutta percha. The indurated area should be clearly defined, and the traumaticine applied on the sound tissues. If the first attempt fails, new barriers may be applied outside the others, even a second or a third application.

Finally, a mixture of vaseline and ichthyol decreases the tension and pain; the surface of the exanthem should therefore be covered by a mixture of equal parts of vaseline and ichthyol.—*Ther. Gaz.*

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Studies in Therapeutics: Trional, Sulphonal and Tetronal.—A harmless hypnotic, useful in all kinds of cases and certain of producing the required effect, is a sort of "philosopher's stone" for modern therapeutic research to discover. Nevertheless, modern research has discovered hypnotics which, in certain cases, are found preferable to the older ones. Among these the group of drugs—sulphonal, trional and tetronal—have been already before the medical public for a considerable time. Sulphonal has been the longest in use of those three and the most employed. Tried in all sorts of cases, it was found in certain conditions to produce the required effects and at the same time to be safer than older hypnotics. It was found useful in the insomnia of nervous irritability, in chronic heart-affections, phthisis, etc., especially when opium was contraindicated. On the other hand, it is some times slow in its action and cumulative in the system, and may be attended with disagreeable after-results, such as anorexia, diarrhea, vomiting, giddiness, headache, or depression. It is said also to increase arterial blood-pressure and to be contraindicated in angina pectoris.

Sulphonal is diethylsulphon dimethylmethane. Baumann and Kast, the latter of whom had first described the hypnotic effect of sulphonal, made a number of experiments upon dogs with compounds allied to sulphonal, and concluded that their hypnotic action increased with the number of ethyl groups in their molecules. Sulphonal contains only two ethyl groups in its molecule, while trional (diethyl-sulphon methyl-othylmethane) contains three and tetronal four (diethylsulphon diethymethane). If Baumann and Kast's theory were correct, then trional should be a more powerful hypnotic than sulphonal, and tetronal than trional, as they were actually described to be in the case of dogs Barth and Rumpel tried to find out how far this conclusion was correct in the case of human beings. They gave trional and tetronal to patients who had already taken sulphonal with advantage. Like sulphonal, both trional and tetronal were found to have marked hypnotic properties, but this action of the three drugs did not seem to bear a definite relation with the number of ethyl groups contained in their molecules, as described by Baumann and Kast in their experiments on dogs. On the contrary, the same dose of any of the three drugs was found to have much the same effect, though it was noted that when any one of the three had been administered several days in succession, a change to one of the others usually intensified the action. In a few cases where sulphonal was slow in its action, trional and tetronal produced a full hypnotic effect. Barth and Rumpel considered that the indications for trional or tetronal, probably corresponded with those for sulphonal, better than the latter. Neither trional nor tetronal, even when given in doses of 4 grains daily, produced, according to these observers, any perceptible effect upon the outbreak or course of alcoholic delirium. No injurious by-effects were observed by them in any of the two hundred and twenty cases in which trional and tetronal were administered. As an hypnotic, tetronal acted in fourteen cases better than sulphonal, in four cases worse than it, and in six cases equal to it; while trional acted in seventeen cases better than sulphonal, in seven cases worse than it, and in six cases equal to it.

More recent observers—Horvath, Hammerschlag, Koppers, etc.—are more enthusiastic as to the advantages of trional. While Horvath, however, from experiments on animals, concludes that tetronal acts better than trional, Ramoni, from experiments on lunatics, thinks that trional is the stronger hypnotic of the two. Trional is a colorless substance, possessing a slightly bitter taste, soluble in three hundred and twenty parts of cold water, and, owing to the rapidity of its action, is best administered about half an hour before bedtime in about eight ounces of some warm vehicle, as tea, broth, or milk. If necessary, it can also be administered by the rectum, its action thereby not being lessened.

The action of trional is much the same as that of sulphonal, but the advantages claimed for it are that it is a more powerful hypnotic, that it may act where sulphonal fails, that its action is more immediate, and that unpleasant after-effects are fewer or absent altogether. Schaefer adds that after continued use of trional no disagreeable symptoms follow its discontinuance, and no "trional habit," it is said, is established; but similar claims made for other drugs have proved ill-founded. The average dose for a healthy individual is about 15 grains, and this will usually suffice for simple insomnia; 20 or 30 grains may be given, if necessary, but with still larger doses the effects do not seem to increase proportionately; according to Koppers, 4 or 8 grains may suffice to diminish night sweats. By experiments on animals, Horvath found that it first increased and then diminished the pulse frequency, that the blood-pressure was only slightly lowered, and that death took place by cessation of respiration.

Among the occasional unpleasant effects observed in human beings, Koppers mentions diminution of blood-pressure in a case of heart-disease, and Hammerschlag and others have noted some slight digestive disturbances. It appeared never to cause albuminuria. In a few cases lassitude, headache, giddiness, tinnitus aurium and a sort of ataxy with Romberg's sign have been noted next day.

Koppers places trional as a narcotic above sulphonal, amylene hydrate, chloralamide, bromides and chloral, but finds that in cases of severe pain it does not possess the power of morphine. Schaefer found that in cases of great psychical and motor excitation trional could not take the place of hyoscine. He likewise attributed no good effects to trional in the treatment of morphino-cocaine psychoses. This is however disputed by Boettiger and Hammerschlag, the latter differing from other observers in finding trional a useful hypnotic in the treatment of the majority of alcoholics. Hammerschlag finds the results as good as or better than those with

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chloral or morphine in the treatment of cases he quotes, including melancholia, mania, hysterical and epileptic conditions, hypochondria, paranoia and general paralysis of the insane.—*British Medical Journal.*

Paralysis Consecutive to a Pseudo-Membranous Angina Recognized as Non-Diphtheritic by the Bacteriological Examination.—Under the above title Bourges (*Archives Experimentelle de Pathologie*) describes a case with the clinical picture of diphtheritic paralysis, but in the throat of which no Klebs-Loffler bacilli were found. The case occurred in a boy of seven years, in whom appeared suddenly high fever, headache and pain in the throat. The next day the tonsils were gray and swollen, but no false membrane was present. Two days later the local signs had gone. Nine days from the first attack a second attack of malaise and fever occurred, with marked erythema on the neck, forearms and limbs, but not on the trunk; the throat was normal, and the erup tion disappeared two days later without desquamation.

A week from the begining of this second attack the patient was taken with headache, fever and sore-throat, and the next day a white, easily detachable false membrane was present over the tonsils; this remained until seventeen days later, when it had entirely gone, and the child was in fair health, though remaining pale and thin.

Sixteen days after the disappearance of the membrane the child became restless at night, and the next day complained of abdominal pain and headache; a little fever was present.

Two days later convergent strabismus developed, followed in forty-eight hours by usual intonation of the voice and regurgitation of liquid food.

The regurgitation disappeared in a short time, but three days after its appearance the child was unable to stand, through still able to move its limbs in bed.

The paralysis remained incomplete, sensation normal, knee-jerks absent. Cure was complete at the end of two months.

The bacteriological examination of the false membrane showed the only virulent organism present to be the streptococcus pyogenes. The child's mother, who had been constantly nursing him, was attacked during his illness by a similar pseudo membranous angina in which the sole pathogenic organism was the streptococcus pyogenes.—*Amer. Jour. Med. Sci.*

The Treatment of Tuberculous Meningitis.—Of all tuberculous affections, Hirschberg (*Bull. Gen. de Therap.*) considers this the most formidable. Cases of spontaneous recovery are rare, and the diagnosis is doubtful in many cases so reported. The treatment of this condition by the ordinary measures employed in tuberculosis is unavailing, since it is the inflammation which accompanies and precedes the formation of the tubercle that destroys the patient. It is the cerebral compression produced by the increased intracranial pressure which is the most marked symptom, and which produces such ravages in the nutrition of the delicate cerebral tissues that death is inevitable. Therapeutic agents have always been directed against this intracranial pressure. Vesications on the head and neck, leeches over the mastoid, and calomel have had little effect. It has been proposed to diminish the intracranial pressure by puncturing the spinal canal in the lumbar region and, by introducing permanent drainage, thus to drain the crebro spinal fluid. This method has not as yet been sufficiently studied, but the author believes, *a priori*, that it has but little rationality to justify it, since the communication between the cavities of the cranium and spinal cord are not, in this condition, the same as they are under normal physiological conditions.

The author believes that the only rational method is to open the cranial cavity,—*i.e.*, trephining followed by drainage. Besides diminishing the intracranial pressure, the trephining may be considered a method of treatment, for the indications are as reasonable for the treatment of tuberculous meningitis by opening and draining as for tuberculous peritonitis; and although the explanation of the rationale of that treatment is yet unexplained, it is considered rational. The author would favor this treatment, as do many English authors.

Although tuberculous meningitis occurs most frequently in children, where it is usually a basilar meningitis, it also occurs in older persons, and is usually in these cases a meningitis of the convexity, while in other cases the symptoms are more localized at the outset, such as paralysis, aphasia and partial epilepsy, which are followed by meningitis.

The point of application of the trephine should consequently be governed by these localizing symptoms if they are present It is necessary for the success of this method of treatment that it should be begun in time. It is a fact that should be understood clearly, that when the diagnosis of tuberculous meningitis is too clear, it is too late to trephine; for when the patient is completely comatose, there is no chance of saving him.

The differential diagnosis between this and other conditions producing like phenomena is sufficiently understood to make delay unnecessary. The author would insist, however, on the utility of the examination of the eye-grounds in every case of suspected meningitis. A sign that is pathognomonic of increased intracranial pressure is a descending crossing optic neuritis (Staunungspapille). This is a sign of great importance, and is never wanting in cases of tumors rapidly developing in the brain, or in acute meningitis.

The most essential point is to operate in time; the next, the point at which to operate. The author would advise the use of the method described by Wallis Ord and Waterhouse, in the classical form or basilar meningitis; but in those rare cases where symptoms of localization have been present, the trephine should be placed over the localized area.—*Therapeutic Gazette.*

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OBSTETRICS AND GYNECOLOGY.

Intra Parenchymatous Injections of Alcohol in the Treatment of Inoperable Cases of Cancer of the Uterus.—There can be no question of the great progress in the treatment of cancer of the uterus marked by the establishment of the operation of vaginal hysterectomy. The operation, nevertheless, saves only a very small proportion of cases. Uterine cancer is discovered too late; there is nothing to draw attention to it in its early stages. In the great majority of cases the disease to too far advanced for radical operation when it is seen for the first time by the physician. Palliative treatment of cancer of the uterus, therefore, becomes one of the most important problems of gynecology.

The use of the curette, cauterization, antiseptic and deodorizing medicaments and hemostatics, have wrought a great change in favor of the sufferers from incurable cancer. The methods advocated by the author and by others probably mark a still further advance. Vulliet divides the cases into two groups:

1. The cases in which the cancer is so far advanced that it is useless to attempt extirpation by hysterectomy.

2. The cases in which hysterectomy has been performed, and there is reason to believe that the neighboring tissues are already involved or a recurrence has actually taken place.

The method of treatment consists in injecting absolute alcohol into the "parenchyma of the neoplasm" and of the surrounding tissues. Vulliet says that he began to practice his method in 1891, but he was anticipated in publication by H. Schulz, of Buda-Pest, in 1892.

There are four cases reported and all of them had been declared inoperable before they came under the care of Vulliet. In three out of the four there were difficulties in the way of continuous treatment. The first case was that of a woman of 41. She had been seen ten years before, and had been then advised to undergo Emmit's operation on account of a deep laceration of the cervix, but declined to have any operation. She had then been treated by other medical men with caustics. In June, 1891, she began to have abundant irregular hemorrhages. In September she consulted a specialist, who expressed regret that she had not come to him earlier. He scraped the uterus, and two months later the discharge returned. In May, 1892, she began to suffer from lancinating pains. After being under treatment in several places, she returned to Geneva, and was afterwards continuously under the care of Vulliet. Her condition before the treatment was begun is thus described:

"The lips of the uterus have disappeared; the ulceration has produced a crater of which the opening encroaches upon the vagina, especially on the left side. The parametrium on the same side is engorged and hard, and the hardness extends literally the whole depth of the broad ligament. The ulceration is an inch deep, and there is abundant hemorrhage from it on the slightest touch."

The treatment was begun by two injections a week, and the ulceration soon became arrested. There was a sort of general retraction of the tissues, and the parts took a healthier aspect. About the beginning of August the first sign of genuine cicatrization was seen. It appeared on the margin of the ulcer posteriorly. There was then such rapid improvement that it was thought feasible to extirpate the uterus by abdominal section, or at least to remove the appendages, so as to put an end to the menstruation, which was profuse and painful. The operation was attempted in the end of August, and ended with removal of the ovaries only; the uterus could be neither raised nor depressed.

Treatment by injection of alcohol was soon resumed and cicatrization went on rapidly to completion.

The treatment which showed itself efficacious as to the symptoms of hemorrhage and sanious discharge has no effect on the pain. It is necessary to have recourse to sedatives as the cicatrization proceeds.

Vulliet gives the details of three other cases rather less satisfactory, and remark on the special features of each.

As to the technique, details are given very fully. The field of operation is thoroughly cleansed by a solution of soda, followed by the use of sublimate solution 1:1000. The patient is placed in the genu-pectoral position the better to expose the parts. As a rule, an anesthetic is not required. Three or four hypodermic syringes filled with absolute alcohol are held in readiness. The first injection is made into the center of the neoplasm. In schirrus the fluid penetrates at once into the firm substances; in soft cancer it may enter friable material and not be retained. In such a case it is necessary to push on the syringe till it touches the more solid base of the growth. Only three or four drops of the alcohol are injected at any one spot. When the injection with the first needle is completed, the syringe is not withdrawn, but the proceeding is repeated in another portion of the tumor with a second syringe, and so on. The object of leaving the syringes is to prevent the reflux of the alcohol which occurs when the needle is withdrawn immediately. When the patient is not sensitive from nine to a dozen injections are effected at a sitting, proceeding from the center towards the periphery. The last circle of injections is made in the apparently healthy tissue which surrounds the ulcerated part.

The injections are for the most part well borne, especially at the beginning of the treatment, and according to Vulliet there appears to be no reason why the treatment should not be carried on in the consulting room or the out patient department of a hospital. In nervous subjects and those weakened by loss of blood and deranged by the use of morpine it is occasionally necessary to administer an anesthetic so as to permit of effective treat-

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ment. The number of injections in such subjects may also be greatly diminished.

Among the phenomena observed when the fluid was injected was a change in the color of the tissues. Immediately after the injection of the alcohol into the parenchyma all the zone of the tissue of which the puncture was the center became suddenly of a greyish white color as if it had been injected by a liquid of that color. Whatever may be the cause of this change it proves the immediate diffusion of the liquid in the parenchyma over a space which often measures more than a centimeter in diameter.

On two occasions the injections were immediately followed by disagreeable sensations through the whole body, but especially in the hands. One patient said she felt as if she had quick-silver circulating in her veins. She very soon recovered, and without any apparent bad effects.

The author says he has employed these "instillations" for a sufficiently long time to convince him that the method is complete and capable of giving as good results as can be obtained by any other palliative treatment of cancer of the uterus. He has not found any advantage in supplementing the method by any other measures, and he has not seen any good from the use of other substances in solution in the alcohol. This last declaration may be considered as a reference especially to the treatment of H. Schulz, who employs a solution of salicylic acid.

In some exceptional cases Vulliet recommends the use of the blunt curette. When by the action of the alcohol the deep-lying tissues become harder there remains on the surface a thin layer of tissue, which neither disappears nor becomes hard, nor organizes into a cicatrix. It may be advisable to use the blunt curette to clear away only loose tissue. He occasionally follows this up by touching with zinc chloride or the thermo-cautery. "The curette and cauterization acting on the surface, and the injections in the depth of the tissue, the cancerous elements find themselves caught between them!" *Med. Chron.*

A Case of Double Vagina, With Operation.—The history of the case is briefly as follows: L. H., aged 20. Family history good. Has been married three years. Nulliparous. Her catamenia first appeared at the age of fourteen; they were regular and usually lasted three days, the flow being free and unaccompanied by pain. The last menstrual period occurred three weeks before she applied to us at the dispensary. There had never been much leucorrheal discharge. Her bowels had always been regular. She had not suffered from any urinary disturbance. Beyond this her personal history was negative. The patient came to us complaining of dyspareunia and of severe headache with bearing-down pains, and at times of a burning sensation during urination. Her general condition was good, but it was noted that the thumbs on both hands were curiously undeveloped, being rather short, so that she is scarcely able to make the tips of the thumb and of the little finger meet.

Examination under anesthesia; the following notes were made at first: "The mucous membrane about the vaginal orifice is much congested, the urethral orifice is dilated so that the first finger can be easily introduced into the bladder. The vaginal orifice itself is narrow, making the examination difficult. The cervix points downwards and the external os is patulous. The uterus is turned forwards, is freely movable, and is slightly enlarged, its surface being somewhat roughened. The right ovary is small and freely movable. The left ovary can not be satisfactorily palpated either by examination made through the rectum or the vagina, but with the finger in the bladder the ovary can be easily made out and is found to be small and freely movable."

I had almost overlooked what proved to be the most interesting feature of the case, but my attention having been called to some further abnormality by a member of the class, upon re-examination I found that the examining finger could also be inserted into another opening in the vagina near the left lateral wall. This proved to be a second canal, which extended nearly the whole length of the vagina. A distinct membranous band of tissue separated it from the first. The measurements of the parts were noted as follows: From the upper border of the perineum to the clitoris 6 5 cm., the remains of the hymeneal folds being found 1.5 cm. within the vagina. The hymen had been centrally perforated; on bringing the portions of the ruptured membrane together the vaginal orifice can be obliterated. The urethral orifice, which is easily dilated to a circumference of 25 mm., forms a depression above the upper limits of the hymeneal fold. The mucous membrane about the urethral orifice is intensely congested. Near the left side of the vaginal orifice there is an area of superficial ulceration measuring 1.5 cm. in diameter. The left lateral cavity in 6 cm. in length, the right 6.5 cm. The cervix uteri occupies the right vagina, being entirely shut off from the left vaginal cavity, which ends in a blind pouch. The pelvic measurement between the two anterior spines is 25 cm. The direct conjugate is 10 cm., and the intertrochanteric measurement is 30 cm. There is also a marked diminution of the hip prominence. The pubic hair runs up into a point towards the umbilicus, after the male type. The vulva externally looks normal. Furrows in vestibule on either side measure 12 mm. in breadth. The escutcheon is well developed, and the breasts look normal.

The operation was performed on March 25, 1894. Upon introducing the blade of a Sims speculum into either orifice, the membrane which divided the two cavities could be easily demonstrated along its whole length. One finger of the left hand was passed along either side of the septum, which was then separated with scissors from without inwards as far as the cervix uteri. The uterine sound was next introduced through the cervix to determine whether or not a septum existed also in the uterus of the cervix, but none was found.

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The length of the uterine cavity was 7 cm. The vagina was then thoroughly irrigated with normal salt solution and 10 per cent iodoformized gauze introduced. The patient made an uninterrupted recovery, leaving the hospital in five days, and has since returned to the dispensary saying that she feels well in every respect, the dyspareunia of which she complained being entirely removed.

In this case it is worthy of note that the urethral canal was used for sexual intercourse.

These congenital anomalies of the genitalia are al ways interesting, and this one deviates somewhat from the form of double vagina usually met with. It will be remembered that, embryologically considered, the uterus and vagina result from the approximation and coalescence of the second and third portions respectively of the Muellerian ducts. Should for any reason the septum fail to disappear, *i. e.*, if coalescence be incomplete, a double uterus or a double vagina or both result, and the double vagina most frequently met with is undoubtedly to be accounted for in this way. But another possibility has to be considered. The third portion of the Wolffian duct (ducts of the mesonephros) runs down on the lateral wall of the vagina and sometimes persists. This duct, commonly known in this region as Gartner's duct, is occasionally patulous; it sometimes opens into the vagina, and may be divided into cysts of smaller or larger size (vaginal cysts in women and cows). The lateral disposition of the smaller of the two vaginal canals in our case, and the fact that it terminated in a blind sac and was not connected at all with the uterus, might be adduced as evidence of its origin from the Wolffian duct, but on account of its size we are rather inclined to accept the view that the case represents a somewhat unusual double vagina from non coalescence of the lower third portions of the Muellerian ducts.—Dr. Hunter Robb, in *Johns Hopkins Hospital Bulletin*

Eclampsia in Mother and Child.—The uncommon occurrence as the title above shows, has induced me to give the very interesting history of the following case (A. Reich, M.D., in *N. Y. Polyclinic*). On April 4, 1895, 6:30 A.M., I was summoned to a woman who was flooding.

The woman a primipara, 32 years old, was in labor, conscious, very pale, complained of severe dizziness and headache. On examination I found that she had been bleeding profusely, two matresses having been soaked through, and a small pool of blood was under the bed. The size of the uterus corresponded to the ninth month of pregnancy and slight contractions could be felt about every fifteen minutes. On internal examination the blood was found rushing away; the os did not admit the first phalanx of index finger; no placenta previa; fetus in L. O. P. position; heart sounds 130, very distinct, two inches below and one and a half inches to the left of the umbilicus.

The manipulation during examination induced more vigorous contraction causing the hemorrhage to discontinue. The mother's pulse was at this time 96, temperture 99°, pulmonic sounds normal. The apex beat was in the left mammary line, first sound loud and prolonged, second sound reduplicated, the aortic being heard before the pulmonary. At 9 A.M. she became restless, complained of crampy feeling in her legs and at the same time complete amblyopia set in. These warning symptoms were soon followed by lightning like twitching of the eyelids and facial muscles. In a few seconds all the voluntary muscles participated in the most violent contractions. All of which contributed to make it a perfect picture of puerperal convulsions. This was followed by deep sleep for ten minutes. In absence of a colporynteur I dilated manually, but the cervix was very rigid and yielded slowly. Fifteen grains of chloral kept her quiet until 11:30 A M. when I added seven drops of Veratr. Virid. to the chloral. Labor was progressing slowly; convulsions were subdued until 6 P.M. when she had a very severe attack and became apparently comatose. At 7:30 the os was sufficiently dilated for a forceps delivery. When chloroforming was attempted she became suddenly maniacal, jumped up and out of bed. She was absolutely unconscious of her doings. It required three women besides myself to force her into bed and chloroform her. She had no further complication except at perineal laceration which has united by primary union. Her vision came back gradually so that now, three weeks after its occurrence, it is almost normal.

The child, a full grown baby weighing five pounds, measured twenty inches; greatest circumference of head thirteen inches; did not cry much; did not take the breast until the second day. All the sutures were widely open, the saggital to the extent of three quarters of an inch; the bones of the skull were very soft, could be pressed in with ease. The baby had slight twitchings of the face during the second day, but on the morning of the third day it was taken with a general convulsion and died—no autopsy.

The mother's urine was pale, acid, sp. gr. 1008, casts hyaline and granular.

Cases of this character are rare. One similar to this was described by Dr. Gustav Woyer in *Centr. fur Gynekologie* No. 13, 1895. In his case the baby's convulsions set in five hours after birth and death occurred seven hours later. He does not say whether the child took the breast, and he attributes the attack to the poison having passed into the child through the placenta. Another case is that of Wilke in the *Centr. fur Gynekologie* No. 17, 1893.

Pregnancy after Ligation of the Fallopian Tubes.—At the December meeting of the Glasgow Chirurgical Society, Drs. Murdoch Cameron and R. M. Buchanan, made a report upon the clinical history and post-morten examination of a case where pregnancy occurred after ligation of the tubes.

Two years before this conception the woman had been delivered by Cesarian section of a healthy mature

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child. Dr. Cameron tied the tubes at that time. Four days after the last Cesarian section the patient, who was a dwarf and rachitic, died of peritonitis, and the post-mortem examination was made by Dr. Buchanan.

The right Fallopian tube showed the constricted portion without any trace of lumen, while the left was pervious throughout, although the canal was much narrowed and the plications atrophied and irregular.

Dr. Cameron said that this was the first case in which he had ever found pregnancy to occur after ligature of the tube, and attributed the fact in this instance to his failure to tie the ligature sufficiently tight. He thought it would be especially dangerous to remove the ovaries at such a time when the veins were enlarged and sepsis might so easily be introduced, and therefore was accustomed to rely upon ligation of the tubes. In his last case of Cesarian operation he had taken the precaution of putting on a double ligature, cutting between, and making such a separation that he did not think union could posibly take place.

Dr. Hector Cameron said he would not have thought *a priori* that a silk ligature would have permanently obliterated the Fallopian tube. There was no analogy between that and an artery. It was fashionable nowadays, when tying an artery, not to try to sever the inner and middle coats; but he himself always did try to do so, and when that was done the reparatory process which followed was almost certain to obliterate the artery at that point. There was no analogy to this in the case of Fallopian tube, and it had always struck him that the method which Dr. Murdock Cameron had described for his last case (double ligature and dividing between) was the right one and ought to ensure success.—*Med. and Surg. Reporter.*

Diagnostic Ureterotomy.—Within the last year Dr. Kelly has performed three operations, at the completion of which he feared the ureter had been ligated, as it appeared in each instance to be enlarged.

It was impossible to ascertain centainly whether this accident had occurred without either taking out a large number of ligatures which had been placed in the ureteral area or catheterizing the ureters. In either event the danger would have been much greater to the patient than the operation about to be described. To remove all of the ligatures in the urethral area and religate all of the bleeding vessels would have consumed too much time, and the catheterization of the ureters would have been still more impracticable.

For these reasons he determined to resort to uretero tomy as the easiest solution of his dilemma. Accordingly he located the ureter at the pelvic brim, snipped the peritoneum over its course, and made a longitudinal incision one half centimeter in length into the lumen, through which he passed a small ureteral sound down into the bladder. In two cases of the three he found the ureters free, the enlargement being simply due to the pressure of the pelvic mass previous to the operation. In the third case, however, he found that the ureter had been included en masse with a large area of bleeding tissue in the pelvic floor. He at once removed the constricting ligature and was able to pass the sound into the bladder. By this simple operation much valuable time was saved, and uninterrupted recoveries in each case justified the statement that the operation is without danger.

In closing the slit in the ureter he used delicate mattress sutures in two cases. The third required four sutures on account of the persistent oozing of urine. These sutures were very lightly passed into the outer coat of the ureter, not entering its lumen.

The cases in which he resorted to this operation were myoma uteri, carcinoma uteri, and dense pelvic inflammatory disease.

All of the patients made complete recoveries, and there have been no apparent ill effects from the operation up to date. He used gauze drainage in each case, and there was not the slightest urinary odor detected at any time on the dressings.

For cases in which there is grave doubt as to whether the ureter has been ligated or cut he earnestly advises this diagnostic measure.—Dr. H. A. Kelly in *Johns Hopkins Hospital Bulletin.*

The Eclampsia Bacillus and Its Relation to Puerperal Eclampsia.—Gerdes (*Deut. Med. Wochenschrift*) succeeded in cultivating, from the serous contents of the abdomen, pleuræ and subdural spaces, as well as from the liver, kidneys, spleen, lung and aorta blood, of a patient dead of puerperal eclampsia, a peculiar and characteristic bacillus. The colonies appeared as little points in twenty-four hours. Microscopic examination of the organs mentioned showed immense numbers of the bacilli. Experiment proved the bacilli infectious.

The author is of the opinion that the decidua is the primary seat of infection. The conclusions reached by him are as follows:

1. The eclampsia bacillus is the only cause of eclampsia, and is not found in any other disease. There is no eclampsia without bacilli. The infection takes place from the uterus, probably from an endometritis which existed before the time of conception.

2. The convulsions which take place from other causes at the time of birth must be most carefully separated from eclampsia, and are shown by post-mortem examination to be entirely different.

3. Eclampsia is a very distinct and characteristic disease.

4. The severe changes which the organs of eclampsia patients suffer can not be explained on the ground of the demonstration of the specific micro-organisms. Probably they are the direct or indirect result of the toxines of the eclampsia bacillus.—*Canada Practitioner.*

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NOTES AND ITEMS

Death After Antitoxin.—A death has been reported from Brooklyn after an injection of antitoxin (North Carolina *Medical Journal*). Whether the death is a case of *post hoc* or *propter hoc* has not been satisfactorily determined. The preparation used was from an acknowledged authority in Germany and was furnished by one of the most reputable drug houses in this country. The physician, Dr. Kortright, in whose practice the case occurred, is well known among his confreres as a painstaking and conscientious physician. Whatever the cause of death in Bertha Valentine's case, it can not check the enthusiasm that the cold statistics of reliable observers have created. Even should the remedy be proven to be dangerous in some cases, that would not be sufficient cause for its discontinuance. Anesthetics cause a death occasionally and always jeopardize the life of the patient, but the danger from the disease is so much greater, that we do not hesitate to place the patient in that condition between life and death and hold him there for hours. The evidence of the curing property of antitoxin is accumulating so rapidly and from such varied sources that it will require more adverse criticism and unfortunate incidents than have yet occurred to destroy the faith of the profession.

Effects of Modern Rifle Wounds.—The London correspondent of the *American Practitioner and News* writes that Prof Victor Horsley has given an interesting lecture on the "Effects of Modern Rifles." First, Dr. Horsley showed some photographs of bullets in flight, demonstrating that in front of every bullet is a parabolic curve of compressed air, while behind it there are a series of little eddies of air rushing into the vacuum created by the flight of the missile. A tin canister was taken, and a ten-grain bullet having a velocity of 3,800 feet per second fired throught it. There were two small holes in the canister. Then the lecturer filled a canister with some wet, soft substance, put on a lid and fired again. The lid of the canister flew off, showing that the bullet in its passage caused the hydrodynamic effect to be communicated right to the outside particles. An empty skull was then fired through, two small holes being the result; then a skull filled with water was treated in the same manner; this time the skull splintered and gaped. Dr. Horsley said these demonstrations showed that when a bullet is fired through a brain the substance is forced in all directions with violence and great pressure against the skull. Prof. Horsley has demonstrated by experiment that after the shock of a bullet through the brain the heart will begin again irregularly, spasmodically, but still it will begin again. The lungs will not. In his experiments the action of the heart and lungs of an animal were indicated by a system of pneumatic tubes and levers upon a chart. An animal under ether had a shot fired at it so as to glance off the skull. Both lungs and heart continued working unchanged. Then a shot was fired through the brain. This time the heart continued to go on irregularly, but the breathing ceased. The net result of these and other experiments was to show that, provided the action of the lungs could be restored, an animal might be shot through the brain and live. The brain with a passage forced through it is still pressing heavily against the sides of a skull. This must be relieved by trephining, and the conclusion arrived at by the professor is, that if a man were shot through the head and were treated first as if he were a drowned person until such time as trephining could be performed, his life might be saved.—*Med. and Surg. Reporter.*

"Enterprise" or Insolence?—An esteemed member of the faculty of one of our New York medical schools has sent us certain documents lately received by him from a Philadelphia firm of publishers of medical books (N. Y. *Med. Jour.*). Our friend asks: "Isn't this sort of insolence worthy of an editorial blast?" Mere mention of the nature of the inclosures will, we think, be all that is necessary. One of them is a printed form for the professor to fill out and transmit to the clerk of the college. It reads as follows: "Please see that the following book, viz..... is given a prominent position in the 'printed 'text book list' under the department of..... in the next college catalogue and announcement." The other is a blank for him to use in reporting to the publishers the fact that he has carried out their wishes, in estimating for their benefit the number of copies of the book that the class would probably buy, and in intimating where a new edition of it may be sent to him, if any is issued.

Inhalation of Chloroform by the Mouth.—At the eighth French Surgical Congress, held lately at Lyons, M. Guerin, of Paris, stated that death from arrest of the heart's action might be prevented in chloroform anesthesia simply by getting the patient to inhale the chloroform by the mouth (*Charlotte Medical Journal*). If a rabbit be made to inhale the vapor of chloroform directly through the trachea after performing tracheotomy, the heart is in no way affected; but if the animal be made to inhale it through the nose the action of the heart is arrested; and now, as the trachea has been cut transversely, the chloroform inhaled by the nose is unable to pass the bronchi. And it is therefore plain that the chloroform acts upon the heart's movements only through the nasal nerves and the cardiac branches of the pneumo-gastric, the former acting reflexly upon the latter. When administering chloroform, its action on the nasal nerves should be prevented by pressing the nose of the patients between the fingers of the hand, and holding the compress till anesthesia is produced, when the nasal fossæ will have no reflex action, owing to being anesthetized.

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ORIGINAL ARTICLES

Practical Points in Abdominal Drainage.

BY PINCKNEY FRENCH, M.D., ST. LOUIS, MO.

Read before the Missouri State Medical Association, May 22, 1895.

Much literature has been written upon the subject of Abdominal Drainage during the last few years, since surgery of this region has been carefully studied, and especially since the introduction of modern pathology. No work, however, has appeared in any language, in which the subject has been fully, clearly and scientifically treated. It is not improper that the most excellent text-books lack full detailed descriptions of the principles and technique of abdominal drainage, mainly due to the fact that within the last few years bacteriology has revolutionized the practice of abdominal surgery, and that with the dawn of asepsis a new era was given to surgery.

The limits of this paper will not permit an extended review of the literature, but the information gotten from a good amount of clinical experience enables the author to present some advanced, systematized, surgical thought on practical points in this line of work, and to make prominent certain details which may not seem so important upon superficial consideration; but, the neglect of which, however, is incompatible with surgical success; and, we may add, that in our opinion, the adoption of these essential details has made the many incisive changes in the results of recent surgical proced ures. The principles involved in this discussion embrace correct observation of common biological processes —an accurate knowledge of regional anatomy, and a perfect acquaintance with physiological functions. The well-known and established methods employed for thousands of years for the preservation of animal substances and the practical adaptation of these methods to the healing of surgical wounds created Listerism or antisepsis, while the discovery (through bacteriological investigation) that the atmospheric microbes were innocuous, led to the belief that infection must be by contact. It was the recognition of this fact that gave birth to asepsis, a systematic method, by which wounds are saved further contact with irritative or toxic substances, such as the bi-chloride of mercury and carbolic acid. It was ascertained that if the protoplasm in wounds suffered no impairment by poison, the wounds would heal without local or constitutional disturbance.

Abdomens are now opened by the experienced operator without thought of danger. The old antiseptic solutions, credited with positive germicidal properties can not be employed within the abdominal cavity, as the absorptive powers of the peritoneal membrane favor general poisoning, so the great advantage of asepsis is especially marked in operations involving the peritoneum. The infection by contact must be prevented; *i. e.*, all objects which touch the peritoneum during the operation are thoroughly sterilized. The abdominal cavity can then be safely closed. No reaction, as a rule, follows laparotomy aseptically performed.

The name of Dr. Ephraim McDowell will always be remembered with enthusiastic pride by every American surgeon, as he was the universally admitted pioneer in this great field of operative surgery.

What more particularly concerns us in this article is the fact that there was a time when it was thought the surgeon's duty to provide a readily available outlet for any fluid that might collect within the abdominal cavity, and that obstacles to prompt recovery could be obviated with a good deal of certainty by the judicious employment of the drainage. The surgeons then differed greatly as to form of dressing, but nearly all agreed as to the necessity of drainage in every kind of deep wound. Those familiar with the literature of surgery will note the fact that at the time, and since Mr. Chassaignac originally introduced drainage, it was for the almost exclusive treatment of wounds and cavities in which suppuration and infection already existed; whereas, at the present period, the use of drainage is with view also of preventing suppuration or infection. The principle can not be equally great or important in both classes of cases, since an "ounce of prevention," here, is worth much more than a "pound of cure." This thought was no doubt in the mind of Mr. Koeberlee, of Strasbourg, when the idea of draining the peritoneal cavity occurred to him. Unfortunately, the opinion has been extensively promulgated that is was impossible to give exact rules for the use of drainage, and that experience

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alone could guide the surgeon; perhaps this was true to a large extent a few years ago, when abdominal work was not extensively done, when antiseptics were in use and before aseptic measures enabled the surgeons to formulate and establish rules of action which will serve to guide those who follow after them. The thoughtful surgeons of the present day, mindful of the practical fact that drainage is only of service when there is something to be drained, and recognizing conditions hereafter to be enumerated, will certainly be able to leave directions for the government of cases which will be found applicable to the after-treatment of a large major ity, if not all, cases of abdominal surgery.

The surgeon who manifests a predilection to drain, in all cases of abdominal surgery, must have little confidence in his aseptic precautions. After every laparotomy, the surgeon must decide the question of drainage before the closure of the wound; for, when the patient's abdomen has been closed, his fate is determined. If the operation has not been done aseptically, or one or more of the conditions herein enumerated existed, and drainage was not established, no kind of after-treatment or secondary opening of the cavity will remedy the error; while it is possible to prevent infection, it is practically impossible to prevent or arrest sepsis, the most fatal poisoning of the whole system, after infection has occurred.

It is not enough that clean hands, sterilized instruments, competent nurses and a properly prepared patient are safeguards against immediate fatal termina tion; but, the conditions classified below must be recognized, when present, as positive indications for such drainage as will prevent injurious effects.

We now enumerate five classes of cases in which conditions are found that make the establishment of drainage an absolute necessity.

First—Where pus is present or enters the peritoneal cavity during an operation.

Second—Where irritant fluid or septic matter is present or enters the peritoneal cavity during an operation (wounds of viscera—bladder and intestines).

Third—Where extensive adhesions are broken up, and many large, raw, surfaces, are necessarily left.

Fourth—The presence of tuberculosis of the perito neal membrane.

Fifth—Where an operation is incomplete, a portion of the growth is allowed to remain or is treated by drainage.

We remark, that the packing of a wound or cavity with gauze, to prevent hemorrhage, or the use of gauze as a tampon in hemorrhages, where an organ is wounded, such as the spleen or liver, is not drainage in the true acceptation of the term, although mentioned as such in many of our recent text-books.

It is such a well established law in surgical practice to drain the peritoneal cavity when pus is formed, either situated locally or in the general peritoneal cavity that it would seem unnecessary to discuss this proposition or the conditions that pertain thereto. There is no more firmly established custom in surgical work than that of opening and draining an abscess, when found in connection with appendicitis, and in fact in these cases of circumscribed abscess, the surgeon has little else to do than to be contented with evacuation, irrigation and drainage with iodoform gauze. The surgeon who makes persistent efforts to find the appendix or attempts its removal in these cases, is in danger of opening the general peritoneal cavity and causing the death of his patient by general septic peritonitis.

There is no better example of the proper use of drainage than is found in the operation for pyosalpinx, and the surgeon who neglects to wall off the general peritoneal cavity by the introduction of sponges, before attempting the removal of the suppurative tubes, is in danger of bringing about a fatal result in his patient although he may subsequently establish drainage.

The conditions pertaining to our *second* requirement for drainage, namely—"where irritant fluid or septic material is present or enters the peritoneal cavity during an operation"—are so apparent to well informed surgeons that we need scarcely urge their importance or necessity.

The surgeon meets with these cases in gun-shot wounds, penetrating knife wounds, and in some diseased processes which more specially affect such organs as the bladder and intestines.

No one would hesitate, it seems to me, to establish drainage after having cleansed the peritoneal cavity of such material as would exude from a wounded gut, although the extent of exudation was limited. He would not know how much septic material would remain in the abdominal cavity, and therefore the fate of his patient would be uncertain.

The conditions enumerated as creating a necessity for drainage in the *third* part of this article, pertain more particularly to the results of inflammatory processes.

The peritoneum is a serous membrane, and like all membranes of this class, is a shut sac, except in the female, where the Fallopian tubes communicate with it.

From a purely anatomical standpoint, the function of the peritoneum is to permit free, smooth movement between the abdominal viscera.

The peculiar physiological function of the peritoneum most to be noted is its enormous absorptive power; this power enables it to neutralize the deleterious effects of limited quantities of septic material, and is a power not possessed to any extent by any other part of the human body. The normal peritoneum will at once absorb into the circulation moderate quantities of active bacteria, where they will be widely scattered through the blood and perish. The quantity of septic material required to produce acute peritonitis varies with the age, size and state of health of the individual. The healthy man will neutralize more septic material than the debilitated one; we have local conditions to take into consideration. In the separation of extensive adhesions the superficial layer of the peritoneum is denuded; this not only favors the copious exudation of serum, but destroys or largely

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diminishes the power of absorption inherent in the normal, healthy peritoneum, if even a moderate quantity of septic material be introduced into the peritoneal cavity, under these conditions and circumstances peritonitis may rapidly develop; in other words, the presence in the peritoneal cavity of a larger quantity of bloody serum than can be readily and speedily absorbed, will suffice to produce septic peritonitis on the addition of a very small amount of septic material. If the serum is promptly absorbed or removed by drainage, before the bacteria have an opportunity to multiply, no peritonitis will develop; therefore, we insist that the surgeon should employ drainage in all cases where a large amount of peritoneal adhesions have been separated, and when necessary, large surfaces have been denuded of peritoneum. This form of drainage is the temporary one, being removed at the end of twenty-four hours or at the first dressing after the operation. The practical point to be observed by these facts is the absolute necessity for drainage in every case of laparotomy where large denudation of surfaces justifies the expectation of a copious exudation of serum and blood.

The *fourth* indication for abdominal drainage, is the presence of peritoneal tuberculosis. The viscera of the abdomen attacked by tubercle, are the liver, bladder, ureters, uterus, ovaries, Fallopian tubes, intestines and peritoneal membrane. In the uterus, liver and intestines it ordinarily follows pulmonary tuberculosis and is therefore secondary. In the bladder, ureters, ovaries, Fallopian tubes and the peritoneal membrane it may be a primary process and is then local; primary tuberculosis of the Fallopian tubes and peritoneal membrane are especially amenable to surgical relief. The latter, when not associated with phthisis and part of general tuberculosis, is often cured by abdominal section and subsequent drainage. The disease is characterized by tumor formations, composed of bunches of bowel omentum and mesentery. The adhesions are gently separated, dusted with iodoform, and the wound closed, with drainage established at the most dependent part, where it is allowed to remain for weeks and months, as needed. This method of procedure is quite the contrary of that practiced for the removal of local tuberculosis in the external parts of the body, where success depends largely upon the absolute suppression of drianage.

In concluding a description of the conditions necessitating the introduction of drainage after surgical operations upon the peritoneal cavity, we wish to remark that the indications for its use are *positive* and the objections urged by eminent surgeons can have no weight with those who recognize its importance. The following objections have been made:

First—That it irritates the peritoneum.

Second—That it causes uncontrollable vomiting.

Third—It interferes with the free movement of the intestines.

Fourth—That it predisposes to intestinal obstruction.

Fifth—That it favors the formation of fecal fistula.

Sixth—That it favors the occurrence of ventral hernia.

Seventh—That it maintains a danger of infection.

To the *first* objection, we reply that it can have but little weight, as the irritation to the peritoneum is local.

As to the *second* objection, it is still a debatable question, its influence being denied by many.

The *third* objection, even if admitted, must be considered as only temporary; while the *fourth* objection is shorn of its weight by reason of the fact that intestinal obstruction, occurring through peritoneal adhesions or bands, is exceedingly rare.

The *fifth* objection is denied by many eminent surgeons, and under proper management can be overcome, as is also the case with the *sixth* objection, which is obviated by keeping the patient in the recumbent posture until the abdomen is firmly healed.

The *seventh* objection should have no weight, from the fact that it only requires additional care, in the subsequent dressings, to prevent it.

We think that we will be sustained by all experienced surgeons in the statement that drainage is no longer a *mooted question* and that the only matter to be determined is *when* and *how* to drain. This article deals altogether with the first proposition, namely, *when* to drain; and we recapitulate, by enumerating the five classes of cases in which drainage, in our judgment, is absolutely necessary:

First—Where pus is present or enters the peritoneal cavity during an operation.

Second—Where irritant fluid or septic matter is present or enters the peritoneal cavity during an operation—(wounds of viscera—bladder and intestines).

Third—Where extensive adhesions are broken up and many large, raw surfaces are necessarily left.

Fourth—The presence of tuberculosis of the peritoneal membrane.

Fifth—When an operation is incomplete, a portion of the growth is allowed to remain, or it is treated by drainage.

Laparotomy in a Child Sixteen Months Old; Appendicectomy; Recovery.

BY LOUIS HAUCK, M.D., ST. LOUIS.

Elsa M., female, aged sixteen months, still nursing, was taken sick with vomiting at about 8 P.M., April 14. The child was healthy and strong and up to bed time was bright and playful. No cause for present illness known except the ingestion of a small piece of banana and a little meat during the day. Vomiting had kept up all night at short intervals.

April 15, at 8 A.M., had a passage from bowels consisting of mucous and blood. Bowels had moved naturally for last time about twenty-four hours previous.

Saw child for first time at 9:30 A.M.

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On examination of abdomen found a tumor the size and shape of a small lemon situated immediately below the ribs and to the right of the median line. Patient was pale and somnolent, lips pale, pulse feeble and rapid, hands and feet cool, head warm, vomiting stercoraceous and repeated every ten or fifteen minutes.

Diagnosis—Obstruction of bowels due probably to intussusception.

Advised operation and having obtained consent of parents operated at 11 A.M.

Dr. Russell kindly administered chloroform and Dr. Eugene F. Hauck assisted in the operation.

The child was placed upon the kitchen table and after having thoroughly cleansed the abdomen with soap and boiled water, it was washed with sublimated gauze dipped in warm crystal water. A median incision two inches long was made from the umbilicus downward.

On inserting the finger the tumor was easily reached and a coil of intestine felt encircling its neck. While endeavoring to get the mass out through the incision the strangulation was relieved and the cecum slipped out through the wound.

The cecum and ascending colon were much congested and thickened by edema and the appendix was as thick as my little finger and echymosed. I determined to remove the latter and quickly did so. Inverting the cut edge by means of three fine silk sutures, closed the opening in the gut completely. The bowel was returned into the abdomen and having satisfied myself that the obstruction had been relieved, closed the wound with a line of buried sutures, two deep and two superficial sutures.

After cleansing the abdomen as before the operation the wound was sprinkled with iodoform, and sublimated gauze and absorbent cotton applied and retained by means of a roller bandage.

Child rallied well from the chloroform and only vomited twice during the day, once at 1 P.M., and again at 5 P.M.; neither time was the vomiting stercoracious, but simply consisted of a watery colorless fluid.

Urine voided twice during afternoon.

At 3:30 P.M., the child had recovered its normal appearance and rested easy. Had allowed nothing but teaspoonful doses of crystal water since operation.

April 16, A.M. Child had rested well all night. Urine voided during night, bowels not yet moved. Ordered glycerine suppository.

April 16, P.M. Only a little dark bloody mucous was voided after use of suppository. Child doing nicely and hungry. Ordered one-eighth grain calomel every two hours till operated. Nothing by mouth but crystal water which child retains. No vomiting all day.

April 17. Bowels moved twice after third powder, the second passage being copious, thin and fecal.

April 18. Child is doing well. Allowed mother's milk which was retained. No bad symptoms following it was nursed sparingly every three hours. The first dressing was allowed to remain for seven days when it was removed and the sutures taken out. Wound had healed by first intention and dressings were dry and clean. The second dressing was removed in five days and an ordinary binder put on.

This case is interesting for several reasons, viz: the youth of patient, the cause of obstruction, the removal of appendix.

The obstruction was caused by a coil of intestine (small) encircling the ascending colon and drawing it up toward the liver. This was possible on account of the unusual length of the mesocolon, which allowed the cecum to move freely and to be caught by the strangulating loop. The portion of small intestine between the loop and the cecum was empty. The appendix was removed, not so much on account of its appearance as on general principles. I believe it would be justifiable practice to remove the appendix in every case where the abdomen has been opened for other causes, as it takes only a few minutes to do it and does not increase the danger to patient. At the same time it removes the source of great dangers in the future, for we know that appendicitis is a very common complaint.

A point in the treatment of this case I wish to call attention to is the early administration of a laxative. I believe that the old practice of putting the bowels in a splint with opium has been abandoned.

To-day, five weeks after operation, the child is well. Two weeks after operation child contracted a severe follicular tonsilitis which somewhat weakened it but from which it recovered entirely in a few days.

Filthy Card Catalogues a Means of Possible Infection.—The *Independent* for May 16, thus refers to the dirty old card catalogue of the Astor Library: "It is remarkable that in this day of germs and germicides nobody has invented a sanitary library card catalogue. Every one that recalls the unspeakable filth of the old and now departed card catalogue of the Astor Library must suspect that it was a highly effective agency in the spreading of disease. The bound catalogue is perhaps even worse, for an attentive observer must often have noted that the average reader in a public library turns the leaves of the catalogue with the aid of a finger dampened by application to his own lips. The commercial exchange of germs by this method must reach a vast volume of transactions in the course of a year."

The 26th Triennial Conclave Knights Templar will be held in Boston, Mass., August 26 to 30, 1895. For this occasion the Wabash Railroad will sell tickets from all stations to Boston at one fare for the round trop. Map of route and guide to Boston will be mailed on application to

C. S. CRANE,
General Passenger and Ticket Agent, St. Louis, Mo.

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EDITORIALS

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DR. W. B. DORSETT, Gynecology and Obstetrics.
DR. E. C. RUNGE, General Medicine.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 2940 Locust Street, St. Louis.

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An Unsuccessful "Coup D'Etat."

After an unusually protracted period of calm in the proceedings of the St. Louis Medical Society, there are indications once more of approaching atmospheric disturbances. The MEDICAL REVIEW does not only register the seismic upheavals and atmospheric convulsions of the St. Louis body politic, but it gives also considerable attention to forecasting the weather in medical circles. In short, we lay claim, with all modesty be it said, to the title of old Probs as to coming medical events in the arena of medical politics.

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There was a ripple of commotion just perceptible enough to slightly agitate the somewhat monotonous equanimity that seemed to have settled down on the peace-loving portions of the St. Louis Medical Society for some months past, when, two weeks ago, Dr. James Moores Ball was elected a member of the Society under rather peculiar circumstances. The word had been given out that the chronic mischief-makers and professional disturbers of medical harmony would come down in a body and sit down unanimously, effectively and irrevocably on Dr. Ball. For what reasons was not stated. Suffice it to say that the simple announcement of the fact that the combine would be out in full force had the effect of bringing out to the floor of the Society an unusual number of members. There was quite a crowd. The mere intimation that the combine intended to oppose the election of a new member sufficed to make Dr. Ball a popular and acceptable condidate to those who would otherwise have opposed him with or without sufficient reason. Dr. Ball was elected and it turned out that he in reality had the support of said schemers, and that it was due to their adroit tactics that his membership in the Society became a fact. The combine had speculated on its well-known and indisputable unpopularity and the trick worked like a charm. Honor to whom honor is due. The opponents, both open and clandestine, to the wily tricks of this well organized party, who had come down to demonstrate to them once more how unpopular they were, looked sheepish, crest-fallen and dumbfounded, when it became manifest that the opposition to Dr. Ball was only a blind and a bluff and that this means had been adopted to inaugurate a new departure in medico political jugglery.

***

The continuation and fructification of this change of tactics became apparent on last Saturday, when the temporary chairman, or rather spokesman of the combine, with many expressions of regret and repentance announced to the members that the time had come when the four applicants for membership, all reputable men in good standing, and, of course, not being in favor with the combine, must be admitted to the folds of the Society, unceremoniously and without due process of the customary procedures.

The Sachem moved that the four gentlemen alluded to be declared unanimously elected members of the Society. The assent to such a proposition would of course have established a most dangerous and far-reaching precedent. Henceforth any of the loud and clamoring impetuous applicants for membership, on whose account so much wordy and actual warfare has at times shaken the foundations of the Society, might have slipped in without any difficulty. Any rainy night, when the staid and conservative members are apt to hug the room, and when the evil spirits have their innings, would have done the job. Then good-bye to the sense of ethics or what is left of it in our old State grand and glorious. Then the pseudo-progressive element, not to call them a hard name, would soon pour in in droves and gain the ascendency over the conservative and conscientiously and honorably working members of the Society.

An applicant for membership, no matter who he is or what may have been the antecedent conditions and circumstances under which his name is presented for admission to the Society, must come before the Society and go through the same formalities that have been provided for by the constitution and by-laws of the Society. They ought to be inviolable, because on them

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rests the vital principle of the Society's existence and efficiency. It is the merit of Dr. Hochdoerfer that an illegal snap-election was prevented and that the *coup d' etat* of the combine, as usual, failed.

The Code Supported.

The fiftieth annual meeting of the Ohio State Medical Society at Columbus, May 15 to 17, has been a very successful one. Many interesting papers were read, some of which will appear in the colums of the REVIEW. About 500 physicians were in attendance. One hundred new members were admitted making the total permanent membership about eight hundred and twenty-five.

One of the most important features was the organization of a committee on medical legislation based on country representation, and the appropriation of $500 to begin their work.

Ethical questions were decided, placing the Society unequivocally in the list of staunch supporters of the Code of the American Medical Association.

The following officers were elected for the ensuing year:

President—Dr. Dan. Millikin, of Hamiltion.

First Vice-President—Dr. J. H. Goss, of Lancaster.

Second Vice-President—Dr. W. H. Humiston, of Cleveland.

Third Vice-President—Dr. Jno. A. Murphy, of Cincinnati.

Fourth Vice-President—Dr. B. M. Ricketts, of Cincinnati.

Secretary—Dr. Thos. Hubbard, of Toledo.

Assistant Secretary—Dr. H. M. W. Moore, of Columbus.

Treasurer—Dr. Jas. A. Duncan, of Toledo.

The next meeting will be held in Columbus, May 27, 28, 29, 1896.

Adroit Advertising.

According to the *Journal of the American Medical Association* "a French physician, desiring to establish himself in Montpellier and not wishing to be too long about getting patients, went to work and systematically and noisily advertised the loss of a valuable dog. The town crier was employed to announce a reward of $125 for the return of the animal. This course caused people to talk and some of them to employ the newcomer. It is said that this 'dodge' was a success." We know of some doctor's in St. Louis who beat the Frenchman.

Donations by the Vanderbilts and Sloans.

—The donations by the Vanderbilt and Sloan families to the cause of medicine, and the relief of the poor in connection with helping along the cause of medical education—as represented by the College of Physicians and Surgeons, New York—have amounted to $2,270,000. This sum has been given since 1884.

MEDICAL SOCIETIES

Mitchell District Medical Society.

The Forty-Seventh Semi-Annual Meeting of the Mitchell District Medical Society will be held at West Baden Mineral Springs Hotel, West Baden, Orange County, Indiana, on July 5 and 6, 1895.

OFFICERS.

President—Dr. Joseph Eastman, Indianapolis.

Vice-President—Dr. Charles W. Murphy, Salem, Ind.

Secretary—Dr. Geo. W. Burton, Mitchell, Ind.

Chairman Com. on Program—Dr. Sam Kennedy, Shelbyville.

PRELIMINARY PROGRAM.

Allison, W. R., Peoria, Ill.—Legislative Medicine.

Andrews, Edmund, Chicago.—Disastrous Effects following Whitehead's Operation for Piles, and so-called "American Operation."

Bernays, A. C., St. Louis.—A Plea for Surgical Interference in Malignant Growths.

Blitz, A., Indianapolis.—Ophthalmia Neonatorum.

Bond, Chas. S., Richmond, Ind.—Subject unannounced.

Cale, Geo. W. Jr., St. Louis.—Sero-Therapy in Surgical Tuberculosis.

Cartledge, A. M., Louisville.—Some Wretched Pelvic Cases.

Carter, J. M. G., Waukegan, Ill.—The Use of Electricity in the Treatment of Diseases of the Stomach.

Catto, Wm. M., Decatur, Ill.—Puerperal Eclampsia.

Cochran, Sam, Louisville.—Litholapaxy.

Coomes, M. F., Louisville.—Report of Cases.

Cullen, Gilbert I., Cincinnati.—Diseases of the Tonsils and their Treatment.

Dabney, S. G., Louisville.—Treatment of Corneal Ulcers.

Dandridge, N. P., Cincinnati.—Present Status of the Treatment of Stone in the Bladder.

Dixon, Arch, Henderson, Ky.—Subject unannounced.

Eastman, Jos., Indianapolis.—President's Address.

Eichberg, Joseph, Cincinnati.—Some Points in Connection with Malaria.

Etheridge, J. H., Chicago.—A Report of Cases.

Evans, T. C., Louisville.—The Ocular Symptoms of Kidney Diseases.

Ferguson, Frank C., Indianapolis.—Subject unannounced.

Frank, Louis, Louisville.—Contribution to the Study of Septic Peritonitis.

Henrotin, E., Chicago.—Subject unannounced.

Heflebower, R. C., Cincinnati.—Glaucoma, Illustrated by a Series of Cases.

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Hodges, Fred. Jenner, Anderson, Ind.—Some Common Neurological Misconcepticns Affecting Surgery.

Hypes, B. M., St. Louis.—The Vaginal Douche in Obstetrics.

Kebler, Frederic, Cincinnati.—Some Peculiarities of the Symptoms in the Recent Epidemic of Typhoid Fever.

Kelly, Webb J., Galion, O.—Three Hundred Cases of Railway Surgery.

Larrabee, J. A., Louisville.—Advances in Infantile Therapeutics.

Link, John Eph., Terre Haute, Ind.—Head Injuries; their Repairative Powers, Eepecially of the Face.

Link, W. H., Petersburg, Ind.—Craniotomy.

Loeb, Hanau W., St. Louis.—Subject unannounced.

Lydston, G. Frank, Chicago.—Subject unannounced.

Nathews, Jos. M., Louisville.—What Operations in Rectal Surgery are Unjustifiable?

McMurtry, L. S., Louisville.—The Use and Abuse of the Curette in Gynecological Practice.

Morgan, W. V., Indianapolis.—Culpable Neglect in Orthopedic Surgery.

Norbury, Frank P., Jacksonville, Ill.—The Mechanism of Nervousness in Young Women.

Palmer, Chanuncey D., Cincinnati.—Intra Uterine Treatment, Means and Methods.

Pierson, Allen, Spencer, Ind.—Remarks on the Management of Chronic Prostatitis.

Pope, Curran, Louisville.—Headaches.

Price, A. D., Harrodsburg, Ky.—Pleurisy.

Ransohoff, Jos., Cincinnati.—Gland Tuberculosis.

Rodman, Wm. L., Louisville —Subject unannounced.

Samuels, F. W., Louisville.—Intestinal Obstruction with Cases.

Sterne, Albert G., Indianapolis.—Lesions of the Upper and Lower Segments of the Nervous System; their Significance and Diagnosis.

Stucky, Thos. Hunt, Louisville.—Some Recent Experiences with Gold as a Therapeutic Agent.

Taylor, P. Richard, Louisville.—When Eneucleate in Traumatic Cyclitis?

Walker, E. W., Cincinnati.—Trephining in Epilepsy with Cases.

Walker, Edwin, Evansville, Ind.—Subject unannounced.

Wathen, Wm. H., Louisville.—Vaginal Hysterectomy Versus Laparotomy for Pelvic Suppuration.

Wirt, Wm. E., Cleveland, O.—Treatment of Scoliosis.

Woody, Sam. E., Louisville.—Subject unannounced.

Woodbridge, John E., Youngston, O.—Typhoid Fever.

The Official Program will be sent out about June 25.

DR. SAMUEL KENNEDY,
Shelbyville, Ind. Chairman Com. of Program.

Medical Review Visiting List (Perpetual).
Postpaid on receipt of 75 cents. Send for it, Doctor.

Grand River Medical Society.

The twentieth annual meeting of the Grand River Medical Society adjourned June 7, after two days of interesting and instructive talks and reports. Thursday's programme was made interesting by addresses and medical reports by Drs. Bottom, of Breckinridge, J. W. Rose of Muddy Lane, A. H. Cordier, of Kansas City and George C. Mosher, of Kansas City.

Thursday evening Dr. J. E. Bennie, of Kansas City, gave an exhibition of chemical photographs, and Dr. O. B. Campbell, of St. Joseph, read an able and instructive paper on "Peritonitis." Dr. J. Block talked on "Bladder Diseases," and was listened to with deep interest. Robert L. Green, of Kansas City, spoke on "Joint Disease," and Dr. Hall Foster, of Kansas City, read an able paper on "Nasal Polypi."

The following officers were elected for the ensuing year:

President—Dr. R. Barney Jr., of Chillicothe.

First Vice-President—Dr. J. Walker, of Bethany.

Second Vice-President—Dr. E. S. Wenger, of Brookfield.

Secretary—Dr. A. J. Simpson, of Chillicothe.

Treasurer—Dr. R. Barney, Sr., of Chillicothe.

Curator and Librarian—Dr. B. N. Stephens, of Chillicothe.

The Society decided to hold its next semi-annual meeting at Breckenridge in December. The regular annual meetings are always held in Chillicothe.

Medico-Legal Society, of Chicago.

At the annual meeting of the Medico-Legal Society, of Chicago, held June 1, 1895, the following officers for the current year were elected:

President—Edmund J. Doering.

Vice-Presidents—Cassius D. Wescott and Sanger Brown.

Treasurer—Joseph Matteson.

Secretary—John Ridlon.

Dr. Frank Johnson was elected to active membership.

Mississippi Valley Medical Society.

The twenty-first annual meeting of the Mississippi Valley Medical Society will held in Detroit, Mich., on September 3, 4, 5 and 6, 1895. Assurances have been received from the railroad companies that one fare for the round trip will be the rate. Wm. Pepper, M.D., LL.D., of Philadelphia, Pa., will read the annual address on medicine on the evening of September 4. Dr. H. O. Walker, of Detroit, the Chairman of the Committee on Arrangements, says the local profession of that city are prepared to entertain the Society handsomely and the indications thus far point to a large and successful meeting.

W. N. WISHARD, M.D.,
Indianapolis, Ind. President.

ABSTRACTS

MEDICINE.

Some Advances in Cardiac Therapeutics.—A cardiac stimulant is described by Dr. W. H. Porter as a remedy that calls into action the intrinsic or stored-up motor power of the cardiac muscle without directly affecting its nutritive condition. Have we at our command an agent that fulfills all these requirements? I believe we have, and recent investigations have proved that in strychnine we have an ideal cardiac stimulant whose worth is beginning to be recognized and appreciated. The attraction existing between strychnine and the vagus center is an accepted fact; hence, besides its power as a cardiac stimulant, it acts with equal force upon respiration, digestion and assimilation. It may, therefore, be said to strengthen the heart directly through the vagi, indirectly through improved muscular tonicity the result of increased activity of the digestive organs.

Porter, in a recent lecture, described the action of strychnine upon the heart as follows:

The tone of the heart-muscle is improved, compensation effected and prolonged beyond the period of administration, because the amount of contractile tissue is increased. A building-up process is the result, not alone of the effect upon the circulatory center, but because the nutrition of the heart, as of the rest of the body, is improved by reason of the action of the drug upon the digestive process.

Reichert, of Philadelphia, has published perhaps one of the best papers on strychnine, and concludes that there can be no doubt that strychnine exerts a number of important independent actions on the circulatory apparatus. The action was not exerted on the accelerator apparatus of the heart or on the heart-muscle. The typical and important effects during the stage of excitement are: a primary decrease in the frequency of the pulse, due to stimulation of the cardio-inhibitory appara. tus; then an increase, due to a depression of the excito-motor ganglion in the heart.

He found that the drug exercises a stimulating influence on the vaso-motor system, followed by one of depression; that the increase of the arterial pressure is due to a stimulation of the vaso-motor centers in the medula, and the fall to their depression, which is preceded and assisted by a depression of the heart.

Strychnine is especially indicated in the weak heart of pneumonia and the febrile processes in general. In these affections it is superior to digitalis, or even the rapidly acting, diffusible stimulants, such as ether, alcohol, Hoffmann's anodyne, and the preparations of ammonia. It should be given hypodermically in one-thirtieth to one-tenth grain doses, repeated until some sign of the action of the drug is manifested.

Washburn, in the *Therapeutic Gazette* for February, 1894, narrates a case of chloroform-poisoning with suicidal intent, where hypodermics of strychnine repeatedly given were followed by recovery of the patient. In another case of chloroform anesthesia where the patient did not recover quickly, but appeared blanched, with an almost imperceptible pulse, rapid improvement followed upon the hypodermic injection of one twentieth grain of strychnine.

In the alarming symptoms which often occur during surgical anesthesia, hypodermics of strychnine act in a wonderful manner, and its use in such cases is gaining favor rapidly. Morton, of Philadelphia, resorts to it at once in cases of surgical shock. In weakness of the heart due to depressed nerve-force, strychnine is of paramount importance, and likewise in those cases of weakened heart's action due to influence of the emotions acting reflexly upon the cardio-inhibitory center.

In the cardiac weakness often associated with neurasthenia, I have had excellent results with this drug, and from its manifold effects regard it as one of the most important agents in the Pharmacopeia.

The heart may be made to do increased work in three ways: first, the relaxation of a normal inhibitory control through the vagus nerve by the cardio-inhibitory center; secondly, through the sympathetic (motor) fibres in the vagus itself; and, finally, through fibres with similar action in the sympathetic system. Strychnine acts upon the heart in the first and second ways just mentioned, and strophanthus acts as a cardiac stimulant or tonic in the second and third ways.

The literature touching upon strophanthus is as yet meagre, and conflicting opinions exist as to its value and efficiency in cardiac therapeutics. Reports are coming in, however, that bid fair to make it outrival its adversary—digitalis—as the action of the two drugs upon the heart is quite similar. To Professor T. R. Fraser we are indebted, along with Drasche, Zerner and Laow, for much that we know regarding the physiological action of this drug. The precise mode of action—that is, its specific action—is as yet not well understood. It slows the heart-beat, lengthens the interval between the contractions, and increases the energy of the muscular tissue. Its effect on the circulatory system, according to Shoemaker, is as follows: it lessens the ischemia of the arteries and increases the rate of the blood current to the veins, but does not materially affect the calibre of the arteries. Strophanthus has been used with good effect in the progressive heart-failure of elderly people, in angina pectoris, but more especially in the tachycardia so often present in functional and organic nervous affections. Moncorvo employs it in almost any period of childhood, from fifteen months to fifteen years, and has never observed the slightest intolerance of the remedy. The strength of the heart was always considerably increased and its rhythm steadied without detriment to the arterial tension, which was generally augmented and always regulated. Moncorvo is in the habit of giving from six to

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ten drops of Fraser's tincture in the twenty-four hours. This author quotes eight cases of mitral disease accompanied by the usual symptoms—palpitations, dyspnea, insomnia, etc.—improved and finally completely cured by strophanthus. In children reduced by severe dystrophic affections, strophanthus is a valuable indirect tonic. In asthma it acts upon the unimpaired cardiac muscle, but has no influence upon the asthmatic symptoms. Parenchymatous nephritis, with or without disturbance of the heart, is benefited, and the infiltration disappears after use of the remedy. The action of the heart is rapidly stimulated and rhythm of the pulsations is secured. In the pulmonary and broncho-pulmonary diseases of children, so commonly complicated with cardiac asthma, strophanthus plays the part of a cardiac tonic.

It is, however, to its use as a cardiac sedative that I would call your particular attention, and more especially in that form of tachycardia so common in Basedow's disease, or exophthalmic goitre. Tachycardia is the most constant of the three cardinal symptoms of this disease, the exophthalmos and goitre being less pronounced and very often one or both entirely absent. In fact, in many cases the tachycardia will be the only symptom present for months, and on this account many cases of Basedow's disease are overlooked and wrongly diagnosed. Where the goitre and exophthalmos are absent or ill developed, the syndrome of Basedow's disease resembles rather closely that of neurasthenia, and these patients are treated as simple cases of "nervousness" by the majority of physicians. The writer has seen and treated ten cases of this disease within the past three years, and has met with uniformly good results in every case. The tincture of strophanthus was prescribed in each, along with the mild galvanic current, in those cases where this was possible. In one case of a young girl, with a pulse of 120 to 150 per minute, with a slight degree of exophthalmos and no thyroid enlargement, the trouble was diagnosed as "heart-disease," and the family counselled to return home immediately from Chicago, where they were attending the World's Fair. Terror-stricken and heart-broken, metaphorically speaking, they brought their daughter home as hastily as possible, so as to allow her to die peacefully in her own home. After six months of strophanthus medication, with occasional applications of galvanism to the sympathetic nerves, she is to-day as active and healthy as any girl of her age.

Another case—a young married woman, seen by me in the Buffalo Woman's Hospital, with an exaggeration of all the symptoms of this affection—made a slow but almost complete recovery under the use of strophanthus alone.

A third case, in which none of the symptoms were very well marked, but which had resisted all forms of treatment, yielded promptly to strophanthus in five-drop doses twice daily.

Without taking the time to report the details of the other seven cases, I can say of them that the results of treatment were not merely temporary, but permanent. In some nerve tonics were administered along with strophanthus, but I do not believe that they acted upon the sympathetic nervous system, but upon the cerebro-spinal.

Ferguson, of Troy (*Therapeutic Gazette*, February 15, 1894), has had uniformly good results with this drug in Basedow's disease, and has observed no relapses. Recognizing tachycardia as an early symptom, he has been able to forestall the blossoming out of the disease through the use of strophanthus. Many of the ablest neurotherapists, as Gray, Gowers, Struempell, Hirt and Seeligmueller, make no reference to it in describing their treatment of this disease, while Hammond, Oppenheim, Corning, Thompson and others rely upon strophanthus for controlling at least the tachycardia.

In the passing procession of cardiac therapeutics, strychnine and strophanthus are in the lead, and doubtless will become more prominent and retain their supremacy because of their influence over the vital centers in the medula to which the various systems of the body look for support and encouragement.—Wm. C. Krauss, in *Therapeutic Gazette*.

The Neurotic Element in Pulmonary Consumption.—In a paper read before the Section in Neurology and Medical Jurisprudence at the recent meeting of the American Medical Association Dr. Thomas J. Mays, of Philadelphia, said that disorders of the nervous system played a prominent part in the production of pulmonary consumption. As far back as in 1842 Cheneau, in a work entitled "De l'Influence de la Huitieme Paire Dans la Production de la Phthisie," attributed this disease directly to disorder of the pneumogastric nerves, and indirectly to an abnormal condition of the central nervous system. Dr. Mays quoted from other authors in support of the nervous theory of pulmonary consumption and said that it would be seen that this subject had interested some of the most prominent minds in the medical profession during the last fifty years. * * * At the very outset, Dr. Mays said, he would lay down the proposition that any agent or influence which had the power of disordering or interfering with the integrity of the respiratory nerves in particular, or with the nervous system in general, also had the power of producing pulmonary consumption and other forms of lung disease. In a recent canvass of the pathological literature of this subject he had found the records of over a hundred cases of phthisis in which the pneumogastric nerves or the respiratory centers had been compressed or injured or diseased in connection with syphilis, alcoholism, diphtheria, measles, diabetes, multiple neuritis, locomotor ataxia, bulbar paralysis, tumors of the pons and medulla oblongata, etc. Phthisis, he said, followed in the wake of many nerve poisons. Mercurial tremor and paralysis were well known, but Kussmaul's investigations had demonstrated the fact that the majority of those who suffered from mercurial intoxication also fell victims to pulmo-

nary consumption. Even the vitality of the children of those who suffered from mercurial poisoning was vitiated, for it was said that scrofula, rickets, and pulmonary consumption were exceedingly prevalent in the children of those who were engaged in mercury manufacture, and that it induced abortion and stillbirths among the female employes. Lead was another metal which had the power of deteriorating the nervous system and of provoking pulmonary phthisis. Statistics showed that the disease was from two to three times as prevalent among the lead-workers in Wales as it was among the farmers living in the same locality.

Among the agents which were most potent in the production of phthisis Dr. Mays placed the abuse of alcohol, and he called the attention of those to this subject who were directly engaged in the study of inebriety. It was well known, he said, that this agent exerted a poi sonous influence on the nervous system, and especially on the peripheral nerves. Very frequently the nerves did not show any marked changes, but on closer examination evidence of parenchymatous degeneration with more or less interstitial neuritis was discovered; suppres sion of the catamenia in women, paralysis of respiration and of deglutition, and disease of the vagi and of the lungs were also observed to be of common occurrence. Syphilis was another nerve poison which was often the unsuspected cause of pulmonary disease, the typical pathological changes of which were an abundance of interstitial connective-tissue proliferation, peribronchial induration, diffuse thickening of the lobular parenchyma, syphilitic gummata, and nodular induration or broncho-pneumonia.

Whooping cough, said Dr. Mays, was pre eminently a specific spasmodic affection of the respiratory nerves, and various authors had ascribed it to irritation of the pneumogastric nerve. The pulmonary changes of whooping-cough were interesting, he said, because they showed the direct relationship between the disease of a nerve and that of the organ which it supplied.

Dr. Mays thought that, whatever might be the precise etiology of influenza, it was essentially a disease of the nervous system. Its morbid anatomy was principally seen in the meninges of the brain, in the spinal cord and in the peripheral nerves. Pulmonary edema, broncho-pneumonia, capillary bronchitis and pleurisy were among its common sequelæ.

Cerebro-spinal meningitis, he said, was an affection which chiefly involved the medulla oblongata and its immediate connections, and it was nearly always associated with pulmonary derangement. Epilepsy was also a disease in which the medulla oblongata was involved, and it was in the latter area, said Dr. Mays, that we should have to seek for an explanation of the ultimate and long-recognized association between this disease and pulmonary disease. Echeverria, Van der Kolk, Jobert de Lambelle, Stuart Cooper and Rostan had reported a number of cases of epilepsy associated with pulmonary disease in which the pons Varolii, the medulla oblongata, and the vagi had been disordered.

Asthma was a spasmodic affection of the pneumogastric nerve, and it was therefore of great interest in this connection to find whether this disorder developed into more serious lung disease or not. Asthmatics, said Dr. Mays, were generally supposed to be long-lived, but he did not believe there was much clinical evidence to support this belief. There were, however, some exceptional cases which were spontaneously cured in the later years of life, but in the majority of asthmatics the attacks inclined to become continuous, and it was to these that he referred; he believed that the tendency in such cases was a termination in pulmonary consumption.

With regard to hysteria, the author said that it implicated the respiratory organs in the form of accelerated breathing, dyspnea, aphonia, laryngeal and pharyngeal paralysis, etc., and had an innate tendency to develop into pulmonary disease either in the individual or in the offspring. Professor Grasset, he said, had found that among the brothers and sisters, grandparents and uncles and aunts of forty-four hysterical patients there had been sixty who had died or suffered from phthisis.

Idiocy also, said the author, had a powerful bearing on this subject, for in 2,380 subjects of idiocy and imbecility in the Royal Albert and Darenth asylums in England it had been shown that a family history of consumption had existed in 674. Dr. Langdon Down, physician to the Earlswood Asylum for idiots, stated that the statistics of London showed that the deaths from phthisis constituted 115 in 1,000 of the general mortality. His statistics at Earlswood indicated that phthisis had been the cause of death in 398 in 1,000 of the general mortality. Dr. Down had also contributed the histories of twenty families, in each of which there had been idiocy, and among the relatives 35 had suffered from consumption. Moreover, no one was surprised to find that insanity and epilepsy created a special liability to idiocy in the offspring, but it was certainly very startling, especially in the light of its supposed bacillary origin, that consumption was more powerful in this respect than any other cause which was known to lead to this disease.

The clinical association between insanity and pulmonary consumption, said Dr. Mays, had been noticed by many authors, among whom Clouston, in his "Neuroses of Development, made the observation that the death-rate from phthisis among the insane was four times as high as among the general population, that both diseases were very common in different members of the same family, and that heredity of phthisis might occasion insanity, and *vice versa*. The same author also stated, in his "Lectures on Mental Diseases," that the forms of insanity commonly associated with phthisis were monomania of suspicion and melancholia. In nearly all pure cases of this kind the patients, sooner or later, died from phthisis. The most marked cases of phthisical insanity were in persons with a strong hereditary tender-

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cy, to both insanity and phthisis or to the neuroses. It was surprising how often both diseases occurred in different members of the same family. The constitutional weakness which tended to end in insanity was akin to that which tended to end in phthisis.

In the *Neurologisches Centralblatt* for 1890, said Dr. Mays, Dr. Bianchi had described a pneumonia which frequently occurred in paralytics, which differed clinically and anatomically from croupous pneumonia. The temperature was usually low; cough and expectoration were sometimes absent; the respiratory movements were superficial, weak and slow; and the affected lung usually remained in a hepatized condition. Frequently there existed larger or smaller gangrenous foci, and nearly always, if the case was of long standing, a puriform infiltration of the alveoli and bronchi. All these manifestations simulated those of pneumonia which he had produced in rabbits and dogs by section and compression of the vagi. In a number of paralytics who had died of pneumonia he had been able to trace a primary degenerative atrophy of the vagi, and hence he believed that these pneumonias were dependent on vagus degeneration.

The subject, said Dr. Mays, was one of vast proportions, and it required a great deal of time to inquire whether the symptomatic and the therapeutic evidence was not equally favorable to the neurotic theory of phthisis as that was which came from the pathological side of the question. Did not, he asked, the weakness, the easy fatigue, the restless sleep, the extreme nervousness which was present in many cases, the dyspnea, the hoarseness and aphonia, the thoracic pain, etc., indicate that the principal nature of phthisis was one of nervous exhaustion? And, therapeutically, was it not true that we got the best results from those measures and agents which proved to be the most efficient in the treatment of nervous diseases? And were not these rest, nutritious food, strychnine, electricity, hypophosphites, cod liver oil, phenacetine, capsicum, quinine and remedies which appealed to and influenced the nervous system?—*N. Y. Med. Jour.*

The Dangers of the Electric Current.—In the *Archives d'Electricite Medicale Experimentales et Cliniques* there is an abstract of a report of the proceedings of the Societe de Biologie in which M. d'Arsonval remarks that in a previous communication he established the fact that the electric currents employed, whatever their intensity, caused only a condition of apparent death which was due to arrest of the heart's action, and in an accident of this kind it was sufficient to practice artificial respiration in order to resuscitate the patient. He relates the following case to prove the soundness of this operation:

A criminal, who was recently "electrocuted" in America, received a current of 4,600 volts, which was 3,000 volts more than had been used in preceding executions. In spite of the high voltage the current produced only a condition of apparent death, for on practicing artificial respiration with a pair of bellows in the trachea the victim was resuscitated.

[We should like to know when and precisely where this happened.]

The conclusion, says M. d'Arsonval, that must be drawn from this fact is, that the employment of electricity for executions must be given up. It is generally believed, he says, that the alternating current is more dangerous than the continuous current. On the contrary, the accidents caused by the continuous current at the high power used by manufacturers are nearly always fatal, the cause of death being due to the electrolytic phenomena which accompany the current. The living body, in reality, is not a homogenous conductor, and the polar action is produced not only at the points of entrance and of departure of the current, but at the surface of each different tissue crossed by the current.

M. Chauveau remared that he had pointed out the existence and the danger of the electrolytic phenomena produced in the close connection of all the tissues during the passage of the electic current.

M. Laborde related the case of a workman who had been restored to life by rhythmic tractions on the tongue at the end of an hour after having received an alternating current of 2,000 volts.

M. Dastre remarked that this restoration was the rule every time when the heart or the respiration was arrested if there was no destructive organic lesion, whatever might be, for that matter, the causes of this suspension of the cardiac or respiratory functions.

M. Chauveau remarked that there was, however, an important distinction to be made, in view of the possibility of resuscitation, between subjects in a state of syncope and those in a state of asphyxia. The first might be restored at the end of a few hours; the latter, on the contrary, at the end of a comparatively short time, not more than a few minutes, were refractory to all attempts at resuscitation.—*N. Y. Med. Jour.*

Present Treatment of Urethritis in New York.—Dr. Ramon Guiteras read a paper on this subject at a recent meeting of the New York Academy of Medicine (*Journal of Cutaneous and Genito-Urinary Diseases*). He stated that the methods of treating urethritis in this city seem to be quite similar both in the public institutions and in private practice, and on the whole it appears to be both rational and conservative. The craze for examining the discharge for the gonococcus seems to have abated, and most men have arrived at the conclusion that in nearly every acute running case, and in by far the majority of the subacute cases and gleets, this germ is present. This puts the consideration of the disease on a similar basis to that of some years ago, and leads us to consider all such cases of evident acute and chronic urethral discharge as urethritis, and not by the names of gonorrhea, specific and non-specific urethritis, strains, etc.

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After discussing the various methods of treatment in vogue at the present time, Dr. Guiteras stated that the

method by which he has obtained the best results is as follows: The acute stage he treats by diluents and anterior astringent injections. The diluent he employs consists of a tablet made by Fraser & Co., containing five grains each of the bicarbonate and citrate of potash, with enough citric acid to produce effervescence. One of these is taken every three hours in a glass of water. The astringent injection is a modification of Ultzmann's, and is composed of five grains each of sulphate of zinc, alum and carbolic acid, with one drachm of glycerine to the ounce of distilled water. This is used three times a day after urinating and washing the anterior urethra with hot water. In rare cases, where there is a great deal of inflammation about the glans and prepuce, with perhaps glandular lymphatic complications, he does not give the injections, but simply the diluent, hot sitz baths, a purge followed by Rochelle salts every morning, and plenty of water. The diet should also be regulated, and a suspensory bandage constantly worn. To catch the discharge a butterfly dressing should be worn. If the injection above referred to has no effect, he orders a stronger one composed of ten grains of sulphate of zinc and half an ounce of the colorless (Lloyd) fluid extract of hydrastis to four ounces of water. If this fails, he employs a still stronger injection—one of Ricord's favorites—composed of sulphate of zinc, ten grains; acetate of lead, fifteen grains; tincture of catechu and opium, each one drachm to four ounces of water. This course of injections, in connection with stimulants, will usually cure an ordinary case of urethritis when no posterior urethritis occurs. If it does occur, the anterior injections are left off, but the diluents continued, with ten drops of tincture of belladonna in addition to check tenesmus. If the process is very acute the patient should be put to bed, allowing him to get up only for two hot sitz baths daily. He is put on a diet of milk and Vichy water. If the tincture of belladonna fails to control the tenesmus, suppositories of the extract of belladonna and morphine, each one quarter of a grain, are substituted. The bowels should be kept open. As soon as the symptoms abate somewhat he begins to give instillations of silver nitrate, one grain to the ounce, every other day at the beginning. The patient is given sandalwood oil, beginning with fifteen drops and increasing five drops each day; or, instead, the santal-Midy capsules, beginning with one capsule and increasing the dose to three capsules daily. If this does not work well, he substitutes cubebs, copaiba, or the Lafayette mixture. If the discharge is rebellious and continues in a subacute form, he employs daily irrigations of a 1 to 3,000 permanganate-of-potash solution from a fountain syringe elevated two feet through a velvet-eyed catheter passed into the bulbous portion of the urethra; if there is a subacute posterior urethritis associated with it, the fluid is allowed to run back into the bladder either by increasing the elevation of the syringe to five feet and compressing the meatus or by slipping the end of the catheter beyond the cut-off muscle. Where this fails he substitutes a weak solution of silver nitrate, beginning with 1 to 8,000 and increasing the strength to 1 to 1,000 if necessary. If a narrowing or stricture exists it should be dilated with the Oberlaender dilator or an ordinary Otis urethrotome. If the gleety discharge continues, an endoscope examination should be made, and nitrate-of-silver applications made through it.

The conclusions drawn by the author in his paper were as follows:

1. That it is impossible to treat urethritis according to any given rule at the present day; a successful method has not as yet been discovered.
2. That specialists are much better able to treat it successfully than the general practitioner.
3. That injections stopping all discharge or reducing it to a moisture about the meatus, such as those of bichloride, permanganate of potash and nitrate of silver, are the most successful means of treating a fresh attack, and that of these, nitrate of silver is the one upon which most reliance can be placed.
4. That in all cases the patient should be treated conservatively, and the treatment should be modified according to the symptoms.—*Coll. and Clin. Record.*

Treatment of Dysentery.—The treatment of dysentery has undergone great changes in recent years, and it varies to-day according to the view intertained as to the pathological character of the disease. In the acute affection the object to be accomplished, doubtless, is the removal, as far as possible, of irritation and the placing of the part at rest; this seems rational, and does no violence to the particular theory one may hold in reference to etiology or the pathological alterations which occur. To carry out the former, evacuants are indicated; the drastics should be avoided; any of the mild cathartics which act promptly and effectively may be used; the saline salts in very large doses perform good service. Calomel is a favored remedy with a considerable proportion of the profession; it seems especially popular with the French, who teach us that as soon as the stools contain bile they regard the case cured. It is prescribed both in large and small doses, preferably the latter, frequently repeated.

Another therapeutic agent also exhibited for its cholagogue effect, and with which I have but a very limited experience in this connection, is ipecacuanha. It is administered in full and often-repeated doses, carried almost to the point of nausea; this is said by many close observers to be excellent treatment.

Having now succeeded by some of the means suggested in evacuating the intestinal tract, the next indication—that of rest—is to be observed. For this purpose opium has been the *sine qua non* for a considerable time and still holds its place with many. There is little doubt that it exerts a desirable influence in controlling pain, modifying peristalsis, etc., thus contributing much to the comfort and cure of a certain number of cases. But when we consider the gastric and secretory disturbance produced by opium, and when we ob-

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serve that the local condition is not only not ameliorated but aggravated in consequence of the retention of the secretions and other intestinal products, it becomes questionable whether this drug should be used at all in this disease. When, for special reasons, it seems indispensable, the alkaloid should be used in the hypodermic form.

Personally, I avoid the employment of opiates whenever possible, except in cases of severe pain and tenesmus, and then only in the form suggested. Topical treatment, in the form of variously medicated enemas, is in vogue in certain quarters with varying success. Usually an astringent, such as silver nitrate, zinc sulphate, copper, etc., in weak or strong solution, according to the fancy of the adviser, is prescribed; as a rule these are not well tolerated in the acute stage.

In the acute stage the plan of treatment which I pursue is the following: Evacuate the intestinal tract promptly by means of a mild cathartic—the salines, but more preferably the mild chloride of mercury, in minute and frequently repeated doses. This done, bismuth subnitrate, gr. xx, and salol, gr. iv, are administered combined from every two to six hours, the astringent and antiseptic action of this prescription having a pleasant sedative effect on the colon. When pain is intense and the tenesmus severe, one-fourth grain of morphia hypodermically is of much value in conjunction with the bismuth and salol. The patient should be in bed, the diet albuminous liquid, so that as small a residue as possible remains.

In the event that the treatment just sketched should fail in its purpose, which occasionally it does, as all plans of treatment do at times, I resort to lavement of the large intestine. The condition or indication which suggests the use of the irrigation is the severe straining and great discomfort in the rectal region which persist in some instances in spite of any or all internal medication. The lavement consists simply of large injections of cold water, to be retained a few minutes, and repeated when the symptoms demand it. Many times after the first flushing the former severity of symptoms does not return, when, nevertheless, it is advisable to repeat the irrigations at intervals of three to four hours. I have just stated that cold water should be employed. This point is to be emphasized; the water from the hydrant is not always sufficiently cold for this purpose. The best results that I have ever achieved came from the effect of ice-cold water. This treatment is not as disagreeable or severe as it may appear to some; the beneficial effects are immediate and pronounced.

The treatment of the chronic form can not be thoroughly discussed here, the length of this paper having already extended beyond its intended limit. I will, however, mention a few of the salient points bearing on this subject. As a general statement it can be said that the proper regulation of the diet constitutes the most important part of the management. The mineral astringents, before alluded to, applied topically, are probably of more value in the chronic than in the acute stage; of these, a strong solution of $AgNO_3$—20 to 30 grains to the pint—in large quantity is the best preparation, as originally recommended by Dr. Hare. Hot water, at 100° F., is vaunted by some as a curative measure.

In Johns Hopkins Hospital they speak in laudatory terms of warm injections containing quinia 1 to 5000, or 1 to 2500, especially for the amebic variety of the disease. The constitutional treatment in the amebic and debilitated patient is by no means of secondary importance, and should receive appropriate medication.

This brief and imperfect consideration of dysentery may serve in a measure as a general guide, and may, we hope, lead to a more thorough discussion of the subject. —W. C. Weber, A.B., M.D., of Cleveland, Ohio, in *Medical Record.*

Treatment of Diarrhea.—We do not intend in this short article to discuss the remedies which are commonly employed by way of the mouth in the treatment of diarrhea, but rather to call attention to the importance of employing rectal medication in many conditions of disease in which the symptom is well developed (*Therapeutic Gazette*). Rectal medication under these circumstances possess the advantage of bringing the medicament near to the seat of trouble, avoids offending the taste through the use of nauseous medicines, and, more important than all, leaves the stomach and upper portion of the digestive tract unimpaired for the assimilation of concentrated nourishment or of such medicines as the general condition may indicate. It is true that the acute diarrheas of ingestion are more readily controlled by the administration of medicines by the mouth, simply because only a few doses are required, and the patient is generally unwilling to suffer the inconveniences associated with rectal medication, though, if the disease be at all chronic, these inconveniences are so slight that, for the sake of relief, he gladly puts up with them.

Aside from the administration of opium and astringent substances by means of suppositories or small injections, we believe that large rectal injections, or injections of sufficient size to wash out the sigmoid flexure and colon, are not sufficiently resorted to, particularly in those cases of diarrhea in which a catarrhal element is well marked. In these catarrhal cases it will generally be found that mixed with the watery portion of the discharge there is more or less mucus in strings or flakes, which indicates, as a rule, that a certain amount of the trouble, at least, is situated in the colon. While the rule is by no means an absolute one, the presence of large quantities of mucus indicates very strongly that the whole trouble is in the larger bowel. It is evident, therefore, that the use of drugs by the mouth is a very indirect way of influencing the diseased area, since the medicament must pass through the esophagus, the stomach, the duodenum, and the small intestine before it arrives at the point where its therapeutic efficaby is to be developed. On the other hand, good results are

attained if large clysters are given by means of a hydrostatic syringe elevated not more than eighteen inches or two feet above the rectum. Such treatment will frequently control the movements, limiting them to one or two in twenty-four hours, even if the fluid character of the stool remains unchanged. Various substances have been employed dissolved in the water to be injected. Some of them have not only a powerful local action, but, in addition, are capable on absorption of producing wide spread influences throughout the body. Among these may be mentioned salicylic acid and its relatives, nitrate of silver, iodoform when given in oil emulsion, and some of the vegetable astringents.

The substance which has always given us the best results under these circumstances is the sulphocarbolate of zinc in the proportion of 10 to 30 grains to an injection amounting to from 2 to 3 quarts. In some instances the water should be tepid, in others it should be as hot as the bowel can stand, and in still others it should be quite cold, the temperature of the injection depending largely upon the acuteness of the inflammatory process and the sensations of the patient, for in the same way that an application of cold water is grateful to a sprained ankle of one individual, while another prefers hot water, so does one patient get comfort from cold injections and another from heated ones. If the water be cold, care should be taken that undue chilling of the body does not result in feeble persons, or if hot, on the other hand, that a mild degree of heat is not produced. The success of this treatment depends absolutely, in many instances, upon the gentleness and care with which the injection is given, and the water must be allowed to trickle into the bowel rather than to enter it with any force, for the three reasons, that (1) if force is used, the bowel immediately resists the injection and perhaps forces it out. (2) It becomes so irritable that further injections are impossible. (3) This condition of rectal irritability reflexly causes irritability of the entire intestinal tract in much the same way that rectal ulcer may cause diarrhea, and, as a consequence, the patient is worse than before the method was attempted. In those cases of chronic diarrhea in which the patient is markedly emaciated and unable to digest much food, so that the condition of impaired nutrition is an important factor in preventing recovery, this method of treatment is to be highly recommended, and it is worthy of note that a small rectal injection, amounting to an ounce or two of iodoform and sweet oil emulsion, in the proportion of 5 grains to the ounce, injected into the bowel after a large watery movement has passed away, will relieve any tendency to tenesmus and, by the absorption of a small amount of iodine, exercise a useful influence over the catarrhal process which underlies the symptom which we are treating.

Local Treatment of Faucial Diphtheria.—Loeffler (*Deut. Med. Woch.*) emphasized the importance of local treatment based on a bacteriological study such as he has followed out in a large number of cases. Many antiseptic solutions kill diphtheria bacilli in a few seconds. Equal parts of turpentine and alcohol were found much more efficient when carbolic acid (two per cent) was added to them. Ferric perchloride kills the diphtheria bacillus very rapidly. The author uses the following application: alcohol (60), toluol (36), and liq. ferri perchlor. (4). Fully developed diphtheria cultures were killed in five minutes. If a dose of virulent diphtheria bacilli was introduced beneath the skin of a guinea-pig, and followed by one-sixteenth cubic centimeter of the above mixture, the animal did not become ill, and even after an interval of one to four hours it was saved. This remedy was used in an epidemic of diphtheria. Among seventy one patients treated out of hospital, not one died. Of thirty hospital patients, five died; in four of these the disease had already extended into the larynx and nose and the fifth died of gangrenous pneumonia. The general condition of the patient soon improved; complications were rare. As long as any membrane remains, a further application should be vigorously used at least every four hours. When decomposition processes are present in the throat, the chloride is converted into sulphate, and is insufficient. Menthol was found a useful addition (10 grains to 100 grains of the remedy). Creolin (two to three per cent) and cresol were found useful substitutes for the iron, but they are inferior in bactericidal properties. The author has also tried the addition of pyoktanin with good effect. In all cases of genuine diphtheria the iron mixture should be used, but where decomposition processes are going on, the other solution, especially that containing cresol, should be tried.

Goldschmidt (*Rev. de Med.*) speaks very highly of the internal use of the perchloride of iron in small and frequent doses. He has used this method of treatment for thirteen years, and has never lost a case where the larynx was intact.—*British Medical Journal.*

Inhibitory Procedures in the Treatment of Hiccough.—In the *Journal des Praticiens* M. Pauzat relates the following case:

The patient, a young girl, had a good constitution and a nervous temperament. There was no positive family history. At the age of 13 she had been attacked with nervous symptoms which manifested themselves under the form of more or less convulsive attacks. She showed peculiar characteristics, and was very excitable. The author thought that if he could have made an examination marks of a distinctly hysterical nature would have been found. In February, 1892, the patient took a very hot foot-bath during menstrution, which was immediately arrested, and the patient's general health was very much affected. It produced an almost complete anorexia, which persisted until the 12th of March, when the patient was suddenly taken with an attack of hiccough which was remarkable for its intensity. It occurred from thirty to thirty-five times a minute, and was accompanied by a noise resembling barking. It continued night and day for three days, in spite of the

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employment of certain procedures commonly used. During the twenty-four hours, however, there were short intervals of rest.

The author was called at once to the patient, and he immediately practiced compression of the two phrenic nerves, according to M. Leloir's teaching—that is, above the clavicle, between the insertions of the two sterno cleido mastoids. The hiccough rapidly became less, and at the end of three minutes it was arrested, only to return, however, after an interval of fifteen minutes. During the two following days revulsives were employed and large doses of chloral and of syrup of ether were taken. The hiccough was then stopped for about twelve hours, when it again made its appearance and persisted with the same violence. The author then decided to resort to nervous compressions as follows:

1. Compression of the two phrenic nerves at the neck for ten minutes. The hiccough stopped but returned in two minutes after suspension of the compression.

2. Compression of the right cubital nerve in the retro-epitrochlear groove for ten minutes. The moderating effect of this procedure was evident, for the frequency and intensity of the hiccough were very sensibly diminished, although it was not completely stopped.

3. Compression of the two phrenic nerves was again employed for ten minutes; the intervals between the attacks became longer, and not more than two or three hiccoughs occurred in a minute. Compression was then suspended, but was replaced afterward by another method, the application of which lasted half an hour. At the end of this time the attack was arrested for about two hours, but returned again at night, when the patient, who was very religious, made a long and fervent prayer asking relief from a condition which rendered her unable to perform her work. Very shortly afterward the hiccough stopped. During the four months that followed this crisis the author saw the patient, and found that menstruation had become re established, and that the hiccough had not returned.

In view of all the conditions of this case, says M. Pauzat, the hiccough seemed to be of an hysterical nature, and it may be that its arrest was due to self suggestion resulting from the prayer; but it is not his desire to call attention to this case, except from the point of view of the effects produced by the compression of certain nerves. Compression of the phrenic nerves arrested the hiccough, but only temporarily, and compression of the right cubital was even less efficacious, although it evidently produced a moderating effect. The new method referred to consists in pressing the soft part of the thumb against that of the little finger. By this means the author has always been able to arrest the hiccough when it is taken in the beginning, and he has recommended the employment of this method to others who have used it with good results. The inhibitory effect is, without doubt, he says, due to compression of the numerous nervous branches in the soft part of the fingers. Pressure of the soft part of the thumb against that of the little finger of the same hand gives rise, in the majority of persons, to a marked tension of the articulations of the first metacarpal with the trapezium and the first phalanx of the thumb. It seems that this tension is not unconnected with the results obtained, and it may thus be understood how pressure of the thumb against the index finger, the middle finger, or the ring finger is less efficacious.

In the application of this procedure the following conditions must be scrupulously and carefully carried out:

1. Pressure of the soft part of the thumb against that of the little finger should be energetic, and made simultaneously with both hands.

2. The pressure should be made as soon as the hiccough begins; once it is established, the procedure may moderate or even arrest it, but it then takes longer to obtain good results.—*N. Y. Medical Journal.*

Diphtheritic Paralyses.—Dr. Felsenthal, of Mannheim, very interestingly reviews this subject, the essential facts of which are as follows:

Even during convalescence from diphtheria, death may take place suddenly from paralysis of the heart. Paralysis of the heart may occur at any stage of the disease, and as late as six weeks after every local symptom has disappeared, hence the advice of Henoch is apposite: "Never give a favorable prognosis in diphtheria until six weeks have elapsed, since all local symptoms have disappeared. Paralysis of the heart is preceded by the following symptoms: apathy, pallor, insomnia, anorexia, emesis and precordial pain. The heart tones are distant; the second tone shows the gallop rythm, a certain sign of cardiac weakness. The pulse is weak and arythmic; the liver, in consequence of stasis, is enlarged, the respirations are increased, and, at the termination of the sickness, merges into the phenomenon of Cheyne Stokes. If the case terminates in recovery, which is rare, the heart tones become stronger and less irregular, and after weeks or months recovery can be perfect. The cause of the cardiac collapse is now supposed to be myocarditis. The treatment of cardiac collapse is almost negative, the essential object being to maintain the strength of the heart until the diphtheritic intoxication has been overcome. Diphtheritic paralyses usually follow the milk, rarely or never the gangrenous or septic cases. Paralysis of the velum is manifested by nasal voice, regurgitation of food into the nose, and anesthesia of the palate and pharyngeal wall. In connection with this form of paralysis, there may be paralysis of the larynx and esophagus, and motor weakness of the extremities; anesthesia may also occur. Muscular paresis of the trunk and upper extremities may develop later; paresis of accommodation, and paresis and paralysis of the facial, oculomotor, and abducens may occur. Relative to the cause of the diphtheritic paralysis, it is conceded to be dependent on a neuritis of the peripheral nerves; changes in the spinal cord, however, may co-exist. The infectious neuritis begins in the nerve endings

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contiguous to the primary point of infection, and travels further along the nerve sheaths. The light forms of paralysis recover spontaneously, whereas the graver forms demand active treatment. The writer details the conventional methods of treatment, but emphasizes the use of the soft rubber tube for the purpose of conveying nourishment to the stomach. This method of treatment has the double advantage of conveying food to the stomach when smallowing is difficult, and prevents, if anesthesia of the larynx and paralysis of the epiglottis exist, the entrance of food into the larynx and bronchi. —*Der Kinder Artz; Occid. Med. Times.*

Treatment of Epilepsy.—In his present teachings concerning epilepsy, Prof. Eulenburg places the greatest importance upon the bromides, especially bromide of potassium, but is of the opinion that a combination of bromides act better than a large dose of any one, and therefore uses bromide of potassium, sodium and ammonium in the proportion of 2:2:1. He administers the combination in water charged with carbonic acid, to escape the cumulative effect of the remedy and the consequent bromism by increasing the activity of the kidneys; at the same time furthering the action of the drug itself. The dose should never be less than 15 grains. As much as 135 to 150 grains have been given at one dose, two or three times, followed by smaller doses. The hours for taking the medicine depend upon when the attacks come on. If they appear during the day, two large doses are given night and morning. If at night only, one dose is given on going to bed. Bromide must be taken for a long time; for two years, at least, after the last epileptic attack, during which period the remedy must not be discontinued, even for intercurrent disease. When it has been ascertained what amount of the medicine is necessary to keep the disease in check, the dose need not be varied, but may be given steadily until the treatment is no longer necessary. About 5 per cent of epileptics are unable to take bromides at all. For these there remain preparations of copper, bismuth, silver, arsenic, atropine, canabine, lobeline, digitalis and curare. Among the newer remedies are hydrate of amyline, antifebrine, antipyrine, borax, nitro-glycerine, osmic acid and ergot. Coffee, tea, tobacco, spices and alcohol especially must be forbidden. Epileptics should eat oftener than others to avoid eating too much at a time. If the attacks are nocturnal, the last meal should be very light, and taken early, omitting all meats and fatty substances. If much anemia or exhaustion is present, nitrogenous food and the Weir-Mitchell treatment are recommended. Out-of-door life and absence of intellectual strain are conditions most favorable to epileptics. Eulenburg considers electricity and hypnotic suggestion thoroughly rational in the treatment of epilepsy. Hydrotherapy is of service, though sea-bathing is contraindicated.—*France Medicale; Jour. Nerv. and Ment. Disease.*

SURGERY.

The Extirpation of Pelvic Growths by the Kraske Method.—At a recent meeting of the Chicago Gynecological Society, Dr. Joseph B. Bacon spoke upon this subject as follows:

In brilliant and aggressive surgery, America is unexcelled, yet the literature of extirpation of the rectum by the sacral method is very scant. Hence we must conclude that many of our leading surgeons have not met with brilliant success in this work or are not yet ready to report. The removal of a part of all or the two lower sacral vertebræ and the coccyx, together with the entire anus and rectum, for an extensive cancerous growth, even in this age of aseptic surgery, seems quite rash; but the advantages of the sacral method are obvious when one compares the results obtained by this method with those obtained by the old method, and considers that the appended list comprises cases that, as a rule, were entirely inoperable by the old method.

My experience has been limited to three cases:

Case I, 1891.—Male, aged 34. Extensive carcinoma of the rectum, extending up five inches from the internal sphincter. The anus and rectum were removed and the lower end of the gut was sutured into the upper angle of the sacral wound. The patient made an interrupted recovery and lived twenty-one months. Secondary carcinomatous growths began in the peritoneal lymphatics and extended to bladder, prostate and liver, causing death from exaustion.

Case II, 1892.—Male, aged 61. Extensive carcinoma of anus and rectum, necessitating their entire removal. Death occurred forty-eight hours after the operation from shock. The growth had involved the prostate and base of the bladder, but this was not diagnosed on account of the malignant stricture and the thickness of the rectal walls. The growth appeared to be distinctly movable, and therefore operable, but the patient was too old for so extensive an operation, and a colotomy should have been done instead.

Case III, 1894.—Female, aged 35. Specific inflammatory stricture of anus and lower four inches of the rectum, with incontinence, complicated by fistulæ. The patient had undergone four operations for its relief during the last four years, divulsion twice and internal proctotomy twice. Operation April, 1894. Complete extraperitoneal excision of anus and four inches of the rectum. Uninterrupted recovery. The peritoneal cavity was not opened.

Fenger lays great stress upon the location of the cancer, whether it is high or low, as regards high or low percentage of mortality after the operation. The peritoneal cavity must be opened in all cases if the cancer is situated high, but it is seldom necessary to open it when the cancer is situated low. In both my cases of carcinoma the peritoneum was freely incised, and the mortality was fifty per cent. Fenger has done four high operations for cancer with a mortality of fifty per cent,

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and seven operations for cancer situated low down in the rectum with a mortality of only 28.5 per cent; he has also operated five times for stricture by the sacral method without a death. He has collected statistics of eighteen operations for carcinoma high up with a mortality of fifty per cent. In the two hundred and twenty-nine cases recorded by fifty-nine European and American surgeons, as above mentioned, there are twelve operations for stricture with no deaths. Of the one hundred and ninety-two cases operated upon for cancer, fifty eight died, a mortality of 28.4 per cent. Many of these cases would to-day be classed as inoperable, and therefore the mortality for the operation at present should be materially lessened. Kraske reported in 1885 ten cases with four deaths, a mortality of forty per cent. Konig collected more recently statistics showing a mortality of twenty-four per cent. Von Bergmann has recently reported twenty-seven cases with only one death, a mortality of three per cent. Thorndike has collected statistics showing an average mortality by the old method of sixteen per cent. As only cases of cancer or stricture situated low in the rectum or at the anus were operable by the old method, the statistics are in favor of the new method. Kelsey has recently reported twenty-four cases, the majority of them non-malignant strictures, with seven deaths, a mortality of 29.1 per cent. McCosh states that he has observed that excision of cancer gives greater relief than any other method. I noticed in my two cases that they had continence of feces, except at times when the movements were diarrheal in character. Fecal continence was better than in any of my cases of colotomy. This should be naturally expected, as the sigmoid is not removed, and as an acute angle is made by bending the lower end of the gut to unite it with the skin at the upper angle of the sacral wound. While the statistics of the sacral method are too new to enable us to form a definite opinion as to the duration of life after the operation, yet the thorough removal of the growth offers a much greater prolongation of life than could be expected by the old method. Czerny, in thirteen years at his clinic at Heidelberg, performed one hundred and nine operations for cancer of the rectum by both the old and the new method. Of these, ten patients died from the operation, twenty-three lived two years, sixteen lived three years, fourteen lived four years, nine lived five years, one patient lived six years, one eight years, one eleven years, and one thirteen years.

Judging from these results, we should in the near future be able to render much greater relief to this pitiable and hitherto hopeless class of patients. The fact that rectal diseases are now recognized as a distinct specialty will tend to keep these patients from irregular practitioners, and as a result cancers will be more frequently recognized in the early stage and the possibility of cure by operation thereby greatly increased.

The cause of death was not given in many of the cases in the list, but most of them were from sepsis. Unfortunately aseptic work in rectal surgery is almost impossible. Much can be gained, however, by thorough cleansing of the anus and rectum. Where the anus and rectum are to be removed the anus should be firmly closed by a strong ligature or heavy forceps, and the bowel kept closed by not severing it above the growth until the peritoneal cavity has been closed by sutures, packing, or both. Five patients died from pulmonary embolism

Schede reports three deaths due to fresh thrombus in the femoral vein, and suggests that forced flexure of the hip joints, together with the elevation of the pelvis, as practiced by many operators, in order to lessen the hemorrhage while doing a sacral section, is a very dangerous procedure on account of embolism.

The advantages of the sacral over the old method for the removal of rectal growths are:

1. After removal of the coccyx and a part of the sacrum the operation upon the rectum is comparatively open and the hemorrhage can be reduced to a minimum.
2. The operation can be done rapidly.
3. Growths inoperable by the old method can be readily removed.
4. Greater prolongation of life and comfort than after colotomy.
5. Less fecal incontinence than after colotomy.

I have been able to collect from the literature, excluding the rectal cases, reports of one hundred and thirty-three cases of pelvic growths operated upon by the sacral method. Of these one hundred and twenty-six were cases of hysterectomy for cancer; two were cases of suppurating dermoid cysts discharging through the vagina, result good; one was a case of cystic tumor, the size of a child's head, situated above the prostate, with recovery (Czerny); one was a case of an almost impacted uterine myoma, by the same operator, with recovery; and three were cases of pelvic tumors with recovery. Czerny also reports eight cases of cervical cancer operated upon by the sacral method with only one death; one case of large uterine sarcoma with recovery, but the patient subsequently died from metastasis; one case in which he removed the uterus by the sacral method, and in which he had amputated the cervix for cancer fourteen years previously.

These reports are good illustrations of a series of cases inoperable by any other method.

Westermark reports one hundred and four cases of hysterectomy for cancer, with twenty-five deaths—a mortality of twenty-four per cent. Of this number he himself operated upon ten cases with two deaths, one immediately following the operation, the other twenty-six days after operation, from cystitis and pyelitis. In this list he quotes Herzfeld, who operated upon five cases with one death. One of his cases is especially interesting and demonstrates the advantages of the sacral method:

Female aged 42. Cancer of cervix. Operation thirteen days after labor. The body of the uterus measured six inches in depth. Hysterectomy. Recovery. Pa-

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tient was able to get up one week after the operation. Supravaginal amputation in this case was out of the question, as the lochia would have infected the peritoneum.

Goffe considers the method an ideal one where the uterus is adherent and there is extensive diseases of the appendages.

Montgomery's cases are very interesting, both as to results and on account of the thorough and radical method of operating. In one case he removed the uterus, pubes, ovaries, posterior wall of the vagina, and the entire anus and rectum, with recovery; in another case he removed the uterus, ovaries, and three inches of the center of the rectum for cancer, with recovery; in another case he removed the utérus, tubes and ovaries for cancer, with recovery.

Schede reported twenty-eight hysterectomies with eight deaths, and stated that the mortality would have been greater had the vaginal method been employed. These patients were operated upon only as a last resort, with very dubious chances of recovery on account of severe hemorrhages and exhaustion. One patient was 58 years of age, another 71, and another 62. He examined fourteen of these patients at periods varying from four to twenty months after the operation, and considers that there is a probability of their being permanently relieved. He believes the sacral method of value in cases in which the vaginal method is impracticable, and that the sacral method is not necessarily more dangerous in uncomplicated cases. He states that recovery is more tedious after the sacral method, and that his experience teaches him that, when the bladder is involved and the disease has surrounded the ureter, it is better to dissect the diseased part of the bladder, and to resect the ureter and extirpate the corresponding kidney, than to be conservative, as in Case 9 of his report. He says radical measures in these cases give the best results.

In this report of one hundred and thirty-three cases there was a mortality of 21 5 per cent. Causes of death: shock two, sepsis twelve, heart paralysis one, hemorrhage three, cystitis and pyelitis two, nephritis one, pulmonary emboli four, iodoform intoxication one, unknown two.

The mortality of the operation in the future must be greatly lessened, for by following the suggestion of Herzfeld and making the operation practically extraperitoneal the risks from sepsis would be reduced to a minimum. He opens the peritoneum through Douglas' pouch; then, when possible, dissects the peritoneum from the fundus of the uterus, and dissects the vagina loose from the bladder by opening into the cul-de sac between the bladder and the uterus. Then, after suturing the peritoneal surfaces together, he closes the abdominal cavity before removing the cancer, and thus prevents infection of the general peritoneal cavity. Again, as Schede suggests, if the Trendelenburg position is not used the danger from pulmonary emboli will be lessened, the hemorrhage will be seen during the operation and controlled, and the danger of secondary hemorrhage from vessels that were overlooked, because they did not bleed while the pelvis was elevated, would be practically avoided.

I have been prejudiced against the sacral method of operation for cancer of the uterus, and in a number of cases inoperable by the vaginal method have advised that no operation be done. Since I have looked up the literature more carefully, however, and have noted the professional standing of the surgeons who have been operating by this method, I am more favorably impressed with the good and great method that Kraske has given us, and believe we have been too conservative in dealing with cancer of the pelvic organs.

The cases reported in this paper were, as a rule, neglected cases, and the operations were done only as a last resort. But, were the uterine cancers more generally removed by this method and the milder cases added to the list, the percentage of mortality would be much lower and the relapses far less frequent on account of the more thorough removal of the diseased tissues.

The indications for operation by the sacral method, as suggested by the principal operators, are:

1. When the uterus is too large to remove through the vagina, and the tumor is impacted in the pelvis.
2. When cancer of the body of the uterus would infect the peritoneum if removed by any other method.
3. When the carcinoma involves the vagina and uterus and sacral glands.
4. Pelvic dermoids or inflammatory deposits that have suppurated and opened into bladder and vagina or rectum.
5. Large tumors of the prostate.
6. Large paravesical tumors.
7. Malignant growths of the uterus involving the rectum.
8. Pelvic deformities, especially osteomalacia.—*Am. Gyn. Obst. Jour.*

NOTES AND ITEMS

The Latest Sensation in Paris is the alleged discovery by a M. Groussier of an infallible law whereby the paternity of children who have no acknowledged father may be ascertained.

Antiseptic Action of Iodoform.—Stchlegoleff (*Archiv. de Med. Exper.*) shows that *in vitro* iodoform exercises a direct antiseptic action on cultures of human and avian tuberculosis. A contact of forty-eight hours sterilizes a culture of human tuberculosis. When introduced into the organism with living and virulent tubercle bacilli, iodoform diminishes their virulence without checking their development. The agent does not act on the vitality of ordinary pyogenic microbes, but *in vivo* neutralizes their toxins.—*Jour. Amer. Med. Ass'n.*

A Russian Censor on Mushrooms.—The Russian censor Korasovsky once erased from a book on natural history the chapter treating of the noxiousness of fungi, on the ground that "fungi form the favorite food of devout Christians on fast-days, and whoever declares them to be noxious seeks to undermine the Christian faith and to diffuse religion."

The Day of the Specialist.

"Two of a trade can never agree,"
The proberb said of old;
And never a doctor could there be found
His brethren to uphold.
But now they dwell in harmony,
And I'll tell you how 'tis done;
The doctors have split their trade, d'ye see,
There's a slice for every one!

CHORUS:

It takes nine doctors to cure a man,
Th' a ninth of a man he be!

The winter winds have harmed your throat,
You must go to Dr. B.,
"Your stomach is wrong," he calmly says,
And passes you to C.
You mention to C. that pain in your eye
That worries you night and day.
"An oculists case," he quick replies,
"Just call upon Dr. J."

Too much Burgundy has blossomed out
In the joint of your great toe;
Now where is H., so famed in gout?
To him you must swiftly go.
And when with doctors and bills you're versed
Till all your nerves succumb,
To minister to a mind perplexed,
Another M.D. must come!

At last you're near your latest breath,
You find yourself laid low;
The faculty are in at the death,
To give you leave to go,
But what's the matter among them all,
They can exactly tell.
For "diagnosis," who but X.
Can answer the question well?

And now life's fitful fever is cured
By a greater doctor still;
The patient is sleeping well at last,
The heirs have read the will.
But e'en in his tomb, his friends report
A specialist's care he'll need.
The "Alienist" Z. must appear in court
Lest his cranky bequest succeed.

—*The Pittsburg Post.*

The Transmission of Tuberculosis by a Brass Horn.—Dr. Addison S. Thayer, in the *Journal of Medicine and Science*, reports the cases of three young men, whose family history was good and who were themselves physically sound, who became infected with tuberculosis by using, as members of a brass band, a second hand horn hired from a dealer. The possibility of tubercle bacilli being deposited in the convolutions of a horn to the danger of subsequent players can not be denied. The three users of the horn in question were the only members of the band who did use it. Two of them are now in Colorado and one in Southern Pines under climatic treatment for tuberculosis. To make the chain of evidence complete it is only necessary to take the horn to pieces and find tubercle bacilli in the dried spittle in its convolutions and joints.—*Med. and Surg. Rep.*

For Better Doctors.—At a meeting of the faculty of the Northwestern University Woman's Medical School, the following resolutions were unanimously adopted and ordered to be placed before the Illinois State Board of Health:

WHEREAS, On three occasions within the past three years, the Illinois State Board of Health has licensed to practice medicine in this State, students who have not properly qualified themselves for such duties, and whose incompetence has compelled us to withhold the degree of Doctor of Medicine; and

WHEREAS, By common report we are informed that the State Board has adopted a similar policy with reference to numerous other persons; therefore,

Resolved, By the faculty of the Northwestern University Woman's Medical School that the State Board be requested hereafter to make its examinations so rigid that persons incompetent to obtain the degree of Doctor of Medicine from first class medical colleges can not obtain license to practice from the Illinois State Board of Health.

Resolved, That the State Board of Health be urged to do all in its power to secure a modification of the State law, so that the privilege of examination for license to practice in this State can only be obtained by graduates of recognized medical schools in good standing.

Resolved, That for the protection of the lives and health of our people, we believe it the duty of the State Board of Health to do all in its power to prevent the entrance into the medical profession in this State of any persons not properly qualified; and further

Resolved, That in the interests of humanity and medical science we believe the State Board should make its standard of qualifications as high as that of the best medical colleges in this country, and that it should do all in its power to aid and encourage the efforts of the profession and the people for thorough medical education and higher requirements of licentiates and for the degree of Doctor of Medicine.

MARIE J. MERGLER, Secretary.

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A Permanent National Organization of the various State Medical Examining and Licensing Boards was effected at the American Medical Association Meeting, May 9, 1895, at Baltimore, Maryland.

Officers were elected for the ensuing year as follows:

President—W. W. Potter, M.D., Buffalo, N. Y.

Vice-President—J. M. Hays, M.D., Greensboro, N. C.

Secretary—B. M. Griffith, M.D., Springfield, Ill.

Committee to draft Constitution and By-Laws—W. W. Potter, M.D., Buffalo, N. Y.; Charles McIntyre, M. D., Easton, Pennsylvania; N. Payne, M.D., Albany, N. Y.

The purposes of the Association are to establish a uniform schedule of requirements for all medical colleges and examining boards, and assist in perfecting a method for higher medical education.

A New Micro-organism Discovered in Pork.—In my work as microscopist in the Bureau of Animal Industry, I have commonly observed in various parts of the muscular system of swine, undergoing inspection with reference to the presence of trichinæ, a peculiar fungus. This fungus presented itself in the form of bundles of threads, have various colors and are intermingled with the muscle fibers, or found separate in a clump under the field of the microscope.

Out of 1,000 hogs inspected daily at the government abattoir, Buffalo, I have found fifty, on an average, to be infected by this organism.

The parts of the carcass from which samples are taken for the trichinous inspection are the diaphragm, neck and loin respectively, hence these were the parts in which I have usually found the fungus. As corrobor ated by Prof. Miller, of Berlin, this organism belongs to the saccharomyces or yeast group. It has very distinctive morphological characteristics and I here present for your inspection pure cultures in every media which we have at our disposal. At a later time I will detail the peculiarities of growth of this organism in the various media and give the results of my experiments upon animals. The former are particularly interesting and present contrasts in many respects to any organism with which we have thus far had to deal. This can only be a brief outline of my contribution. I direct your notice to drawings of different culture tubes made by Mr. F. C. Busch. They are very accurate and serve to give you an impression of the luxuriant manner in which the organism thrives in artificial media, and of the coloration which it produces. I will later show you photo micro graphs, produced by Dr. Hill, and will have their duplicates thrown upon the screen for more detailed inspection. A pathogenic potency of this fungus—saccharo myces porcus—is shown by the destruction of white mice and rats twenty-four hours after inoculation. I have recovered the organism from the blood of these animals, which is found to be heavily laden.

My paper will appear in full in the official reports of the Bureau of Animal Industry, United States Department of Agriculture.—Buffalo *Med. Jour.*

Heroism of a Military Surgeon.—The English papers refer with great pride to the gallant behavior of Surgeon Whitchurch in the Chitral campaign. The following is taken from the *Medical Press and Circular* for May 8: "Surgeon-Captain H. F. Whitchurch, attached to the 24th Bengal Native Infantry, performed a feat of exceptional gallantry on the occasion of the *reconnaissance* of May 3 from Fort Chitral. Captain Baird fell mortally wounded, but Surgeon-Captain Whitchurch, although running serious danger of death or capture by the enemy, would not abandon him, but carrying the wounded officer on his back, fought his way back to the fort."

Phlebotomy of the Hands to Prevent Abortion.—In the *Lyon Medical* for April 28, there is an abstract of an article by Viscaro, which was published in *El Siglo Medico*, in which the author states that in several cases of threatening abortion he has successfully employed derivative phlebotomy as recommended by the ancient writers. He has practiced it on one of the veins of the hand, without drawing more than two ounces of blood. He cites several cases in which he has rapidly obtained the cessation of symptoms of abortion and in which pregnancy has attained its normal term. This treatment, he says, should not be reserved for plethoric women only, although it is contraindicated when the patients are greatly debilitated.

Bellevue Hospital Medical College.—At the annual meeting of the faculty held on May 7, the following changes were made: The title of the chair held by Dr. Joseph D. Bryant was changed to that of anatomy and operative clinical surgery; Dr. Bryant to continue his surgical clinic on Saturdays and to give two lectures a week on anatomy and one lecture a week on certain subjects in operative surgery. Dr. George D. Stewart resigned as one of the demonstrators of anatomy and was appointed to give one lecture a week as lecturer adjunct on anatomy, under the direction of Professor Bryant. Dr. Stewart was also nominated an assistant visiting surgeon to Bellevue Hospital. Dr. H. M. Silver resigned as demonstrator of anatomy. Dr. John F. Erdmann was appointed professor of practical anatomy and put in charge of the dissecting room. Dr. Winfield Ayers, Dr. William G. Lusk and Dr. John J. Rothwell were appointed assistant demonstrators of anatomy. Dr. Reginald H. Sayre was appointed lecturer adjunct on orthopedic surgery. Dr. Austin Flint, Jr., was elected professor of obstetrics. Dr. William H. Park was appointed instructor in contagious diseases.

The Price of Dr. Adolf Alt's book—"A Treatise on Ophthalmology, for the General Practitioner," has been reduced to $2 50 from $3.50. See advertisement on page 11.

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ORIGINAL ARTICLES

The Administration of Quinine in the Light of Blood Examinations.

BY DR. LUDWIG BREMER, ST. LOUIS, MO.

Read before the St. Louis Medical Society, April 27, 1895.

The causal relation between the plasmodium, so-called, and malaria is to-day as well established as that of the tubercle bacillus with tuberculosis. Its discovery has marked a most important step in the evolution of pathology. Although bacteriology in its modern aspect, *i. e.*, teachings of the toxines, had already paved the way to a rehabilitation of humoral pathology, it was the discovery of the disease producing organism in malaria, its utter divergence from the bacterial form of life, and above all its peculiar arrangement to the blood corpuscle, which stimulated research in one of the most neglected fields; namely, the pathological anatomy of the blood.

The examination of the blood for the plasmodium is at present the most tangible, and, perhaps, practically the most important of all blood examinations. Although malaria does not play an overwhelmingly predominating part any more in the practice of medicine in our country, as it did a quarter of a century or still more, 30 or 50 years ago, it is even in our days of frequent enough occurrence to render a pathologico-anatomic diagnosis desirable.

Such a positive diagnosis is furnished by the demonstration of the plasmodium. Now, I claim that, in our present trend of medication, it is not so much the positive finding, as the absence of this organism in the blood in cases where we would expect to meet it, that its value is pre-eminent; in other words, we are, in spite of the introduction of the coal tar remedies, still inclined to prescribe quinine where, in my opinion, it is not indicated.

In our part of the country physicians are apt even to-day to look upon many ailments as due to malaria, which, in reality, have nothing to do with this disease either directly or indirectly. Quinine, as a specific, has no influence in such cases. It is, therefore, of the greatest clinical importance to exclude from therapeusis a drug which, in antiperiodic, *i. e.*, in antimalarial doses, is certainly not a substance indifferent to the human organism. A medicine which is capable of producing such profound disturbances on the sensory and sensorial nerves, or rather nerve centers, as are familiar to all practicing physicians, disturbances which, though generally transitory and disappearing on the discontinuance of the remedy, are in some instances, and rightly so, accused by patients as having permanently altered or damaged one or another of the nerve functions, such a drug ought not to be administered with levity or tentatively, as is often done, to ascertain whether a case is malarial in character or not. I only need mention here the almost constant tremor which is observed even after comparatively small doses, the tinnitus aurium, complicated in some with most alarming degrees of hard hearing, approaching absolute deafness; again there are the familiar visual disturbances, amblyopia and even amaurosis, known as quinine blindness. Even mental symptoms (in the predisposed) in the shape of hallucinations of hearing, but especially of sight, are not rare. A drug of such potency for evil ought to be employed with the greatest care and only after the microscopical establishment of the pathogenic organism of malaria.

I hold that our generation is particularly susceptible to the untoward, *i. e*, poisonous effects of the cinchona alkaloids. With many, a medium dose of quinine means days of nerve misery. Such patients go all to pieces, as the expression is; their nerves get shattered, and a number of days are required to recover from such a nerve-storm. Still, many patients take the remedy heroically, when prescribed by a physician, although knowing perfectly well what is in store for them. Generally speaking it may be stated as a safe proposition that the greater the tolerance of this drug in a person, the greater the power of resistance of his nervous system. It is also a fact, which every practitioner of experience must have observed, that the tolerance of the alkaloid decreases with the increasing nervous cachexia, so frequently setting in as a sequel to repeated or protracted plasmodium invasion. I have also had occasion to observe that, as other nerve idiosyncrasies, that of morbid susceptibility to the untoward effects of the cinchona alkaloids is often transmitted by heredity. This may be only a special manifestation of a general

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nerve deterioration. I am inclined to believe that the increased nervousness in our farmer population, among whom neurasthenia and allied affections are almost as prevalent as among the town- and city-dwellers, is, in a measure, due to the malaria and the formerly existing necessity of saturating the organism with the recognized antiperiodic. This, of course, does not mean that quinine ought to have been dispensed with, or that the descendents of the quinine-saturated ancestors would be stronger and healthier but for the quinine medication. Perhaps they would not exist at all, had their progentitors not been dosed with the drug.

But these remarks are rather retrospective and speculative in character. The object of this article is to point out the practical advantage to be derived from the blood examination of doubtful or suspected cases, and, although it must be admitted that the blankly negative character of such microscopic findings is, in the present state of our knowledge, still a lamentable fact and unsatisfactory, when compared with the positive findings in genuine malaria, it is well to know when not to give quinine, although certain clinical symptoms seem to point unmistakably to the existence of this disease. Among the affections which symptomatically simulate malaria I shall mention only those which, in my opinion, are most frequently associated with the disease, and which, in reality, have no connection with it. Kidney affections, especially those latent or marked forms which in another paper I have described as "Latent and Intermittent Chronic Parenchymatous Nephritis[1]," characterized by casts in the urine without albumin, are particularly apt to lead to the assumption of existing malaria. The many incongruous and often unexplainable symptoms of this disease, frequently marked by pronounced periodicity and febrile attacks, are apt to be diagnosed and treated as malaria, invariably without any success, as is almost unnecessary to remark. The demonstration of casts in the urine of such persons teaches that the poison circulating in the blood and giving rise to periodic attacks resembling malarial chills and fever, is a waste product which the kidneys have failed to excrete. In other words, such quasi malarial manifestations are mild attacks of uremia. I know positively that acute nephritis, supervening from one or another exciting cause of the latent or chronic form which remained undiagnosed owing to the baneful faith which many physicians still have in the negative findings of chemical tests, has been treated as congestive chills, when uremia ought to have been the diagnosis.

Then, there is the large class of neurasthenics with their periodic nerve storms, manifesting themselves also in the form of almost typical malarial attacks, viz.: chills, fever and sweating, or in the shape of dumb ague. These unfortunates are only too often maltreated with quinine in massive, *i. e.*, antiperiodic, doses. The fact that temporary improvement results in some cases is very misleading. I am acquainted with a number of medical men, who, convinced of the correctness of their diagnosis that malaria was at the bottom of their own periodic wretched feelings, would take fifteen, twenty, or even fifty-grain doses of quinine on the theory that it was dumb ague that ailed them. I can positively state, that on closer acquaintance all such heroic users of their own medicine have, if not a shattered, at any rate, a damaged and unstable nervous system, although they may not, on superficial examination, exhibit any signs of this morbid state of their nerves.

Particularly pernicious seems to me the dosing with quinine of that large class of children between five and twelve years of age who, being in reality neurasthenics or of a neuropathic constitution, if you choose, are subject to periodic febrile attacks, which are regularly mistaken for malaria and treated as such. I have seen quite a large number of such children, whose parents were hard to convince that these sufferers would get over their attacks much quicker without, than with quinine. These attacks generally disappear and fail to return with the improvement of the general health following hygienic and dietetic treatment. In such children, too, it is generally disturbances of the digestive tract that causes fever, delirium and other symptoms, which keep the parents in a state of constant alarm and unjustified fear of a congestive chill of malarial nature.

Again, the large and variegated class of genito-urinary diseases generally mimic malaria. That the chill initiating cystitis and, in nervous individuals, accompanying the simple operation of introducing a catheter may give rise to an almost typical attack of malarial fever, every physician knows; but it is not so well known that the chronic cases of this class, but especially the genito-urinary neuroses, are prolific in malarial counterfeits.

That the therapeutic sin of unnecessary and, in my opinion, harmful quinine medication is but too frequently indulged in in the initial stage of typhoid, and, for that matter, of other infectious diseases whose course is not a typical one, I had repeatedly occasion of observing during the typhoid fever epidemic of four or five years ago. The periodic chills followed by high temperatures, which marked the first week of so many cases, were generally interpreted as being due to malaria; hence, the erroneous and mischievous diagnosis, "Malarial Remittent Fever," under which so many cases of typhoid figured in the reports of the City Board of Health. I made many microscopic blood examinations at that time. In probably 20 or 30 clinically doubtful cases the plasmodium was regularly absent. It may be objected here that, as an antipyretic on general principles, it certainly did not do any harm. This I doubt. I have seen a number of quinine collapses in my consultation practice, accidents which, suggesting the appearance of "heart failure," so-called, were ascribed to any other cause than to massive quinine doses.

I might easily multiply the number of instances in which malaria is habitually and erroneously supposed

[1]Medical News, Philadelphia, Oct., 20, 1894.

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to exist, and where therapeutic measures are instituted accordingly. The examples given above may, however, serve as types of mistakes of this kind. The simple examination of the plasmodium would prevent many of the diagnostic and therapeutic blunders; but, unfortunately, not in every instance.

There are affections directly due to, or arising as a sequel of, malarial infection, single or repeated attacks, diseased conditions of the system, which, though calling for quinine as a remedy and generally benefited by it, offer the anomalous finding that the plasmodium can not be demonstrated in the blood of such patients. This I have time and again observed in cases of so-called masked malaria, the most frequently observed form of which is probably periodic supra orbital neuralgia. It is said that sometimes this is the only symptom of malarial infection. Quinine in large doses is, as is well known, an effective remedy. Strange to say, I have, in the four cases which I had an opportunity of examining and which there was every reason to believe to be due to malaria, never been able to find the plasmodium, although they recovered under quinine treatment. I may here remark, that of late, since I have adopted the habit of examining the urine of every case of nervous trouble that comes under my care, I have often found casts in the urine (no albumin) of patients suffering from periodic neuralgia. Such cases I should, several years ago, have diagnosed as malarial neuralgia; I now know that these, at least, are uremic in character. That even this class of neuralgia may temporarily disappear under the use of quinine, I have no doubt. Again, I am of the opinion that malaria may, even after the exciting cause has disappeared, exist after a fashion, an alteration of the blood having taken place and the production of toxic materials having possibly been inaugurated by the parasite which (the production), even after the removal of the parasite, is kept up by the morbidly impressed organism. Such a view would not conflict with the experience in other infectious diseases, where it has been demonstrated that the original disease-producers, the microbe, may not be capable of demonstration any more, whilst the disease set up by them persists. Another proof in evidence of the supposition, that malaria or its products reproducing themselves without the help of the plasmodium, may continue to exert their influence on the host of the parasite, is the behavior of the body of the patient after the plasmodium has undoubtedly left it. In my own case, years ago, I often observed that whenever I visited swampy and notoriously malarial localities I had, within a few hours after, the familiar premonitory symptoms of an attack of chills and fever. Whilst a fresh invasion of an already weakened body, forming a receptive soil, must be admitted as a possibility, it is not in keeping with our present knowledge of the plasmodium that it could multiply in so short a space of time to such an extent as to make itself felt to the host. Among the many strange and unexplainable phenomena, which at all times have puzzled the observers and students of malarial diseases, is the one which I experienced in my own person. Five years ago, while in Jena, Germany, and after having been exposed to the night air on the low and damp meadows which surround that town, I felt one day all the symptoms, and actually had, a mild attack of, typical chills and fever. For over fifteen years I had been free from malaria. It so happened that about three weeks before, while still in St. Louis, I had repeatedly examined my blood for histological purposes and never found a plasmodium, which certainly would not have escaped my attention. The surroundings of Jena, though in former centuries notorious for its malaria breeding soil, are now free from the disease, Professor Rossbach, then professor of internal medicine in the University of Jena, to whom I related my experience, informed me that no case of malaria, as coming from the environs of the town, had been reported to his clinic for years. But others like myself had had the same experience, viz.: persons having been once affected with malaria, acquired elsewhere, had gone through a renewed attack after having been exposed to the influence of the soil on which, many years ago, malaria used to abound, but from which it had in the course of time completely disappeared as an indigenous disease. Possibly, experiences like this may be explained in the light of future results of research. For the present it is as impossible to account for it as it is for the many freaks with which this disease astonishes the observer. One of the most peculiar of the strange and inexplicable features, which I will only mention here, is the observation which is quite common among African explorers. According to almost unanimous testimony the rather paradoxic fact has been established that those inhabitants of malarial districts that stay in their houses most, are peculiarly liable to malarial attacks, and that, in spite of the fatigue and other disease-favoring conditions which an expedition through swampy regions entails, the participants remain comparatively free from malaria, which, however, breaks out often in its most pernicious form, when the place of destination, comparatively free from the disease, has been reached, and a more comfortable and hygienic life has begun.

But the present paper was intended to deal principally with the actualities and practical side of the question. Such a question is: To what extent does malaria exist in our part of the country, and particularly in St. Louis? Basing my opinion upon the examination of the blood of about 500 individual cases, many of whom were examined over and over again within the last seven or eight years, I have come to the conclusion that in our city at least malaria is an extremely rare disease. This is contrary to the assertions of other physicians, some of whom claim that every fourth or fifth case treated by them is malaria. So rare, indeed, is the disease, at least in its pronounced forms, that about four years ago I went to the City Hospital for a number of months in the hope of finding a good plasmodium infected subject, in vain. The cases pointed out to me as malaria and treated as such, proved to be affections which had

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nothing in common with that disease. The only genuine cases in which, after patiently waiting, the parasite could be demonstrated, had been imported from Southern States, Arkansas and Louisiana, etc. This, of course, does not mean that there are no cases which are not St. Louis born and bred. I merely give the result of my experience at that time.

As another practical result of my investigations, I will mention the fact that I, too, experimented with methylene-blue as a substitute for quinine, on patients admitted to the City Hospital. The attacks of chills and fever invariably ceased and the plasmodium disappeared from the blood. But the same was true of, patients who had received no treatment whatever, and in whom the improvement in diet and hygienic surroundings sufficed to destroy the parasite.

My disapproval of large doses of quinine, especially in cases of doubtful and ill-defined malarial affection, may possibly be likened by one or the other member of the Society, to the rather superfluous task of carrying coal to Newcastle. However, I have witnessed what I conceive to be the abuse of quinine, almost daily, even recently. There are many quinine cranks who take the drug habitually, being under the impression that they are suffering from chronic malaria, whilst, in reality, their chills and fever, with which they are occasionally or periodically attacked, are really nervous chills, as some physicians and laymen diagnose them. The ounce bottle of quinine, which in some households is looked upon as an indispensable fixture in the household, harbors many dangers; as many, perhaps, as the antipyrine or phenacetine bottle.

For, there is certainly such a thing as the quinine habit, which, although not as pernicious as the alcohol or morphine habits, is responsible for a good deal of nerve degeneration. I would particularly warn against toxic doses which sometimes are given to infants. In whooping cough sometimes 10 grains at a dose are given, in some cases with surprisingly favorable results so far as the mitigation of the cough is concerned. Whether this improvement does not take place at the expense of the general health and especially the nerve tone of the patient, is another question. In my experience, extending, it is true, only to a few cases observed in the practice of other physicians, it seems that such heroic measures are followed by nervous weakness.

I believe that the employment of quinine, although greatly reduced in our days when compared with the time twenty or even ten years ago, will safely bear a still greater reduction. Precision in the diagnosis of malaria is rendered easy by the finding of the disease producer. For those affections which are remotely or in directly connected with a former malaria infection, a daily allowance of five grains will go as far, so far as practical and lasting results are concerned, as ten or twenty grains, which with many still seems to be the regulation dose for a day.

In a nervous age like ours we ought to try to be chary with the administration of a drug which is essentially a nerve poison.

A few general remarks in concluding this article: That the remedy was known long before the nature and cause of the disease, and that, by the use of quinine, large parts of this country became inhabitable and civilized, which would to-day still be held by the Indians had it not been for the alkaloid of the cinchona bark, is a somewhat discouraging fact for experimental research. Empiricism in this instance, as in so many others, got the better of strictly scientific methods. But it is consoling to know that years before the discovery of the parasite of the disease, the otherwise unintelligible periodicity of the attacks was explained by a presumed swarming out of the spores. It is also of interest to know that Binz, the German pharmacologist, had demonstrated the toxic action of quinine on the ameba, an experiment which I repeated and verified several years ago. The plasmodium being an ameba like organism, this experiment is, though not conclusive, at any rate highly suggestive. That malaria is a water-born disease, as has been lately insisted upon by some writers in this country, has been an axiom with many African explorers. The black water disease, so fatal to the expeditions of the dark continent, speaks for itself. It is the most dangerous of all the malarial affections and owes its origin, without the slightest doubt, to the drinking of plasmodium infected water. That in this country, too, there are malaria-wells and cisterns, is an observation which I think I have made with a reasonable degree of certainty.

Necrosis and Rarefying Osteitis of Tibia, Fibula and Tarsal Bones.

BY FRED. HUTCHINS, M D., WOODBRIDGE, CAL.

The following case attracted a good deal of interest among the several physicians who saw it, and I report it with the hope that it may help some professional brother.

A. M., male, age 67, farmer, married, father of several strong, healthy children. Has always enjoyed excellent health. December 27, 1894, I was called to see patient by Dr. Latta, who was in attendance. He had then been confined to his bed for over ten weeks. Dr. L. tells me he was called on account of violent pain and swelling of the left leg below the knee, mostly just above the ankle joint. Dr. L. diagnosed rheumatism and gave soda salicylate, with but little, if any, benefit. The center of trouble appeared to be at about the junction of the middle and lower thirds. The pain was continuous day and night, sleep being only obtained by morphia in liberal doses. Temperature generally from one to two degrees above normal. Appetite fairly good. Urine normal. When I saw the case first there was a small ulcer just inside the crest of the tibia, that had destroyed the skin and superficial fascia. Introducing

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a probe I found a narrow sinus of about three inches right over the course of the perineal nerves. This was slit up on a grooved dissector, washed out and packed with dry lint. I also found a spot just in front of the tendo acillis on the outer aspect of the leg that felt as though full of fluid. This was opened and discharged about three drachms of straw colored serum. The most careful inquiring gave no history of injury. I recommended an expectation treatment, the wounds made to be kept clean with peroxide of hydrogen, the limb supported with a bandage. Diagnosis doubtful. I expressed to Dr. L. a fear that necrosis might be going on, but so long as it could not be found it would remain doubtful. Dr. L. continued in attendance between two and three weeks longer when the case came into my hands. He opened four places in the skin, nowhere finding pus, but always a thin serum. When I took the case three of these places had healed. For the next seven weeks that leg played fast and loose with me until I was sick of it. Several times I thought it was going to get well quite soon, but it always broke out in some new place with a new train of symptoms. I opened it three times, continuously explored every open place and at last, after seven weeks, my probe slipped into a pin hole in the deep fascia and through the periosteum onto dead bone. I at once made preparations for an operation. February 22, with Drs. Coleman and Newton to assist me, I operated. An incision was made on the crest of the tibia about five inches long down to the bone, the periosteum was raised each way with a bone chisel, and with mallet and chisels and scrapers I removed every particle of diseased bone. The incision was enlarged both up and down until it was over seven inches long. Over one-half of the diameter of the tibia was dug out for all this distance. The cavity was cleansed with boiled water, dusted with pulverized boracic acid, packed with lint that had been dipped in a strong solution of this acid while hot and then dried, aseptic cotton was laid over this and the limb bandaged. The operation lasted thirty-five minutes. Patient came out of the anesthesia all right, and suffered but very little from the operation. For three weeks it promised to be a success, when suddenly, without warning, the granulations at the lower end began to melt down, a thin, icherous, foul smelling pus was discharged, and patient showed signs of hectic. I determined to amputate at once, March 24, with the kind and efficient aid of the same gentlemen who assisted before. I cut the leg off about one inch above the middle, doing a flap operation. The arteries were tied with chromatized catgut. I noticed that the interosseous was twice as large as the internal tibial. I also tied three veins. The flaps were washed off with boiled water, dusted with boracic acid and dressed with aseptic cotton and bandaged. Patient made an excellent recovery and was discharged in two weeks. After the leg was amputated I examined it. The fibula, the cancellous stricture of the lower end of the tibia, the os calcis and all the bones of the tarsus looked as though the animal matter had been dissolved out of them. A layman looking on aptly expressed the condition as "dry rot." The bones were white and so soft that a bone chisel held in the hand could be thrust into them. The ankle joint was always movable without pain and there never was a single symptom that would indicate any trouble in the foot, even to one that has done a good deal of surgery during the past twenty-five years. Of course, had I known the condition of the bones I should have removed the offending member at first, but I see nothing in looking backward that would have justified me in amputating sooner, or would have excused me for not trying to save the leg. I take no pride in limbs I have cut off, but in those I have saved. I hope this account of a case that has been the source of both instruction and anxiety to me will help my brothers laboring in the same field.

Gonorrheal Immunity.—Jamin (*Ann. des mal. des org. Genito-Urin.*) in reviewing a recent work by Guiard on gonorrhea, comments favorably on the author's theory regarding inoculation and immunity, based on the following facts.

1. Gonorrhea is a self limited disease, recovery following after a varying length of time, without any treatment other than ptisanes, bath and hygiene.

2. Abortive treatment does not succeed rapidly and fully until the period of acute inflammation has passed.

3. A patient, either male or female, apparently, though not really cured, is capable of transmitting a subacute gonorrhea—that is, the colorless drop of secretion is capable of inoculation if it contains a few gonococci.

The author consequently believes that the gonococcus during its evolution modifies its culture-media—*i.e.*, the uretheral mucous membrane. It continues to grow there but becomes more and more attenuated and latent, until it finally disappears. Unless this is true, a gonorrhea, untreated, would last indefinitely, the cocci multiplying and reinoculating themselves in the infected urethra continuously. It is at the time when the virulence begins to diminish that abortive treatment succeeds. If, on the other hand, this attenuated gonococcus comes in contact with a healthy mucous membrane in another individual it is immediately rejuvenated, prospers and produces acute gonorrheal symptoms, since it finds there a suitable culture-medium, which is not exhausted with that from where it came and where it was about to die. The objectors to this theory say: "If you admit that the role of the culture-medium is thus superior to that of the microbe, how can you explain acute attacks in men having gleet? How can their exhausted mucous membrane become reinoculated?" Guiard believes this reinfection is impossible in cases where the gleety discharge contains cocci. He, however, reserves his opinion regarding this form of relative immunity until further facts are procured.—*Amer. Jour. Med. Sci.*

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EDITORIALS

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All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

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Black Bile and Injured Innocence.

We are pained and inexpressibly chagrined to register the fact that an article which appeared in the last number of the REVIEW, gave rise at last Saturday's meeting of the St. Louis Medical Society to an outburst of ill feeling on the part of our immortal friend and esteemed contemporary Isaac N. Love. The careful reader and constant subscriber (let us hope) of our Journal will bear us witness that in all our editorials, partaking of a controversial character, we have been constantly endeavoring to cultivate true Chesterfieldian urbanity. We challenge any body to produce in the columns, which we are responsible for, any evidence or even dissemblance of any invective, abusive remark or unparliamentary utterance. In the article referred to we simply stated what is a fact, that some members had come to the meeting and cast their votes in favor of Dr. Ball, because the report had it that he was to be blackballed by the combine.

***

Our friend Love took the floor and stated that any insinuation of this kind was an outrage. He insisted on the purity of his motives of everything he did and was ready to defend his position with word, pen and muscle. We felt sorry and even at the same time surprised to see his genial mood ruffled and his ire stirred up to cyclonic proportions by the simple statement of an incontrovertible fact. It is passing strange indeed that a gentleman of such jolly disposition as Dr. Isaac N. Love is the happy possessor of, bandying about in his editorials such startling epithets as "jack-ass, little gray ass," etc., etc., and using adjectives like "pusillanimous, puking, puling," etc., etc., as applicable to the "Editor of a propietary medicine sheet," that such a gentleman and a scholar should be so susceptible, nay touchy, on reading an article which in the main, if anything, is complimentary to him. We do not mean to hurt anybody's feeling and consider it our duty to register events which concern the medical profession in the way that we view and understand these events; if our style and manner is not to the liking of our highly valued friend, and if our articles cause him any heart burn, we feel sorry indeed; because we ourselves prize the blessings of a good digestion and would not, under any consideration, contribute to the bringing on of a fit of bilious dyspepsia in a colleague. We are sure that on second sober thought the genial proprietor and editor of the *Mirror*, that stanch advocate of the "truly meritorious proprietary medicines and none else," will see the error of his ways and that at our next meeting his genially lit up countenance will smile upon us benignantly and cordially as of yore. One parting remark to our friend: We, too, are willing to defend our position with word and pen, but we draw the line at the muscle. We have a well developed biceps and punch the bag every morning. This is the only use that we propose to make of said biceps.

***

Dr. James Moores Ball, a newly elected member, has seen fit to read the incriminating article, or a large portion of it, at the meeting aforesaid, claiming that he was placed in a false light and disclaiming any trickery or machination to secure his election. If the doctor has interpreted our remarks as casting aspersions on his bearing in this matter, we must say that in careful perusal of our article such an interpretation is simply inconceivable to us. The sum and substance of it may not be flattering to Dr. Ball, but we contend that it does not constitute the slightest ground for complaint. It does not contain any offense, calumny or malice, premeditated and aforethought so far as the newly elected member or anybody else is concerned. As the editor of a medical journal we have the indisputed and constitutional right to speak of events in the light as they appear to us. This is the freedom of the press. Our editorial was penned in the interest of the integrity of the St. Louis Medical Society and against political machinations.

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By the way, it would be of interest to know, who hunted up and primed the reporter of the *Post-Dispatch*, before the meeting was over. The highly party colored

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report which this paper gave, and in which the editor of the REVIEW is made to appear in an unenviable role, is somewhat suggestive of the authorship. Let it be understood, that under existing conditions the giving out of reports constitutes a misdemeanor, which the Committee on Ethics ought to look into.

Dr. John H. Bryan. +

Again the sad duty involves upon us to register the death of a friend and a highly esteemed member of the St. Louis medical profession. Dr. Bryan was one of the most unostentatious, noble, amiable and frank natures we had the good fortune to be well acquainted with. The deceased possessed in the fullest measure that which is most desirable, the love, respect and esteem of those having the best opportunities to know him well. When he was a student at the Missouri Medical College and a classmate of ours we had ample opportunity of ob serving his unusually good qualities as a fellow student, scholar and man. His prospects then appeared brighter than those of most of his contemporaries and his later conduct and career were characterized by the noblest motives and intentions.

We feel and know that if an unfathomable destiny had not cut off his life's thread at so early an age the great expectations, placed upon Dr. Bryan's career, would have been fully realized. Dr. Bryan was a graduate of Princeton and of the Missouri Medical College, he was Assistant Surgeon of St. John's Hospital and at the Missouri Medical College Clinic, he was also a member of the St. Louis Medical Socity and, at a time before he was ailing, attended its meetings quite regularly. His memory will be sacred to his many friends and colleagues and particularly to those who, like us, were his fellow students.

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, April 27, 1895; the Vice-President, F. R. FRY, M.D., in the Chair.

***

DR. ROBERT FUNKHOUSER presented

MODIFICATION OF TAIT'S AND A. R. SIMPSON'S METHOD OF PERINEORRHAPHY,

and illustrated the same by charts.

DR. E. GREGORY, SR.—It is remarkable how things happen. The operation just described by Dr. Funkhouser as Tait's is mine also, one I have practiced for years at the St. Louis Mullanphy Hospital. I look around in vain for one of my pupils to sustain my claim—none seem to be present to night. Certainly, the surgeons familiar with the practice of the hospital know the fact. My boast is not that I originated the operation, but rather that the operation was originated by a great man—for, I doubt not, it is original with Dr. Tait—nay, more, because he esteemed and practiced it. It is, however, not less a fact that I practiced the operation before I heard the name of Tait.

DR JOHNSTON asked what consequences the performance of this operation would have on subsequent confinements.

DR. A. R. KIEFFER had performed a perineorrhaphy on a patient some years ago, pretty much according to the method described by Dr. Funkhouser. He feared that the rupture would recur at a possible subsequent pregnancy, because the outlet was somewhat small. The patient did become pregnant again, but was delivered without any tear whatever.

With regard to the introduction of the skin sutures, speaker differed with the method described by Dr. Funkhouser. It is probably desirable to get them as close to the margin of the skin as possible, in order to insure a round loop after the ends are tied. If introduced too far from the cut edge they will be liable to cut through the included portion of tissue. But it is also desirable to get union by first intention. If the sutures are introduced inside of the cut skin margin the skin will heal over them and prevent their removal without disturbance of the union. This interference is objectionable.

DR. C. C. MORRIS had done the operation described by the Essayist; also Hegar's and Emmett's operations. He considers Hegar's the ideal method in these cases, because the sutures are of catgut, are buried, and need not be removed; the denuded mucous surfaces of the vagina are drawn completely together, the wound is completely closed, there can be no chance of infection from the vagina, nor is there any chance for stretching of the wound. Emmett's operation, too, had proved eminently successful. He had yet to meet with the first case to give an unsatisfactory result.

Speaker agreed with Dr. Funkhouser, that silkworm gut is the ideal suturing material for perineal operations. He is in the habit of leaving them in place without trimming the ends, and tying them in one knot. If cut short, the sharp ends are liable to greatly annoy the patient.

The sutures need not be allowed to cut through the tissues if they are removed at the proper time. If the perineum is going to unite at all it will have done so on the fifth day, and it is therefore useless to allow the sutures to remain longer.

DR. W. H. MAYFIELD had done a great many perineorrhaphies, but had not adopted Tait's method, because all cicatricial tissue is left in situ, sometimes to the great detriment of the patient's nervous system.

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We know of cases where a scar in the scalp has produced epilepsy by the continous irritation, and on this same principle nervous phenomena are attributable to scar tissue in the perineum. Emmett was the first to call attention to this fact, and the results achieved by the speaker bear it out. The removal of the cicatricial tissue will result in a cure in 99 cases out of 100, as shown in the results achieved in 329 cases.

Dr. L. Bremer.—I should like to ask the Doctor if I understood him to say that he has operated 329 times to remove cicatrices?

Dr. Mayfield.—Perineal, complete and incomplete lacerations.

Dr. Bremer.—And that these were cases of nervous women—women of nervous manifestation—and that 99 out of 100 recovered from the nervousness as a result of the operation?

Dr. Mayfield.—I do not think that I said that exactly.

Dr. Bremer.—My understanding of it is that you said 99 cases out of 100 of women with nervous troubles—hysteria and other nervous troubles—were cured by the removal of these cicatrices. Is that correct?

Dr. Mayfield —I do not think I said that. I did not have special reference to the nervous condition. I will say that where the nervous condition was due to the irritation of this cicatrix in the perineum, caused by the laceration, the operation relieved it.

Dr. Bremer.—How do you know it was due to the cicatrix?

Dr. Mayfield.—The statistics of the cases show it.

Dr. Bremer.—I do not doubt the statistics, but I do doubt the connection between the nervous symptoms and the cicatrix in the perineum. How do you establish the connection between the nervousness and the laceration, or a lesion of any sort, especially where you have to deal with a cicatrix in the genital tract? I will admit that there is such a thing, because a cicatrix on the head—on the scalp—will sometimes give rise to what are generally called reflex symptoms of a very serious nature. I have seen it on the arm give rise to spasms. By the slightest pressure on the scar on the arm or scalp you could produce convulsions; and, therefore, we could trace the causal relation between the cicatrix and the nervous phenomena. But I should like to know how we can determine that the lesion in the genital tract causes such nervous disturbances. It is not unlikely that if the woman has a nervous trouble and her attention is called to the cicatrix in the perineum, that she may associate the two together, so that an operation on the cicatrix may apparently have some effect.

Dr. Mayfield.—I did not mean to say, nor do I wish to be understood as saying, that in cases of nervous women who have cicatrices in the perineum, the removal of the cicatrices will, in 99 out of 100, cure the nervous trouble. But I have seen many cases where the removal of the cicatrices did cure or stop the nervous phenomena, and I do say that the operation for the repair of the perineum will prove successful in 99 cases out of 100, if done according to the method I refer to, providing all cicatricial tissue be carefully removed.

Dr. Funkhouser said that there had been a great number of operations suggested for this trouble, some of them apparently differing only slightly from others. The only point that distinguishes this operation is the fact that no tissue is removed. Another point made by Tait and others, is the insertion of the sutures inside of the denuded surface, just a few lines underneath the skin. If the skin is turned in union at this point is interfered with.

As far as the difficulty of removing the sutures is concerned, that can be easily overcome. Some operators have inserted a piece of silk, or silkworm gut, the whole length of the incision, and tied the sutures over it leaving the ends long. Speaker has been in the habit of inserting and bringing the silkworm gut out on the denuded surface, and leaving the end long and projecting between the edges of the skin, which has been sutured by cat gut. The silkworm gut sutures can be very readily cut with a small, sharp-pointed scissors, and removed by gently pulling upon them.

He did not agree with Dr. Morris, that 5 days is a long enough period to allow the sutures to remain. The sutures cause but little irritation and should be left from two to four weeks, and even at the end of that time ulceration does not take place. The danger in removing the sutures too early lies in the tendency of the scar to give.

In regard to whether the perineum is likely to tear at subsequent deliveries, Tait claims that this has never happened in a case operated upon by him. Speaker's experience had been somewhat limited, but in some cases it had not torn, on the contrary, it seemed better able to withstand the force which is likely to rupture it.

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The Administration of Quinine, as Viewed in the Light of Blood Examinations.

Dr. Ludwig Bremer read a paper (see page 481) with the above title.

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Stated Meeting, Saturday Evening, May 4, 1895; the President, F. D. Mooney, M.D., in the chair.

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Dr. L. H. Laidley presented a "Necrotic Appendix," which he had removed this morning from a young woman, 21 or 22 years of age.

The patient had an attack of suppurative appendicitis two years ago, about one pint of pus having been removed at that time through a transverse incision in McBurney's region. Since this time patient has had about six attacks of recurrent appendicitis, which were accompanied by all the characteristic symptoms, although they were of a mild character.

Last Wednesday she was again seized with a chill

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followed by temperature ranging between 101° and 104° F., and intense pain. When first seen by the speaker she was partially under the influence of opiates which somewhat masked the symptoms.

She was placed upon a table and a bimanual examination revealed no mass in the region of the appendix, but tenderness was very marked over McBurney's point and extended over the whole right side. The symptoms between Friday afternoon and Saturday morning indicated a progressive peritonitis which was rapidly becoming general.

Patient was properly prepared for the operation by a trained nurse, and in view of the tendency to a general septic peritonitis the incision was made through the linea alba. The head of the colon was found adherent to the abdominal wall and the ascending colon was deeply injected, indicating a spreading of the septic process. The adhesions were broken up and the colon was delivered so as to allow of a better inspection of the field of disturbance. The necrotic appendix was found and easily removed in sections from its attachments. In one section, about three quarters of an inch long, the mucous membrane was still preserved, although it had been entirely separated from the bowel proper.

A pocket of pus had formed behind the large bowel and was circumscribed by adhesions between the large and small bowel and the peritoneum. The pus could not have been removed as readily by a lateral incision. The adhesions were torn up, all necrotic material removed, the cavity flushed and drainage established by means of a glass tube and gauze.

The most important and, as yet, not definitely determined feature in these cases is, when to operate, and how to proceed in getting rid of the necrotic material. These questions are answered by the views of Murphy, when he says that we should operate as soon as the diagnosis is made; also, that we should not simply cut for the pus, but that we should open up the abdominal cavity, explore it, clean it out and remove all necrotic tissue, just as we would in cases of pyosalpinx or other suppurative processes in the pelvis.

Dr. A. H. Meisenbach considers an accurate anatomical knowledge of the parts, a history of the trouble and the result of inflammatory breaking down of the tissue essential features in determining upon a proper course of treatment. When we have a clearly defined tumor, a definitely circumscribed area of pus formation, as is usually the case in suppurative appendicitis, it must be considered a hazardous experiment to interfere with the conservative process of Nature, in breaking down the limiting wall and exposing the general peritoneal cavity to septic infection. Surgeons generally do not favor the meddling with Nature's conservative efforts, and, while these cases may be successfully treated through a median incision and a breaking down of the limiting wall, those results must be classified under the head of "luck." These cases should be treated on the same principles as simple abscess formations in other regions. Simple cutting down into the abscess cavity, evacuating the pus, irrigating and gauze packing gives the patient the best chances for recovery and does away with the danger of a possible general septic peritonitis.

Dr. J. H. McIntyre would hesitate very long before opening up the general peritoneal cavity, and then only after he had found it utterly impossible to get the pus out by incising through McBurney's point. He had opened up the peritoneal cavity for a general suppurative process on several occasions and had flushed the cavity with hot distilled water, but not in cases where the pus was circumscribed.

As a general rule he would do an operation as outlined by Dr. Laidley, and then only after he was sure of a correct diagnosis. If a man feels sure he is correct he must go ahead and do the best he can.

Dr. Laidley had not been talking of simple suppurative appendicitis, but of general peritonitis resulting from this primary focus. He had had a number of cases of suppurative appendicitis in which he operated according to McBurney's method, and all of them got well. In another case the lateral incision was made, but no focus of pus could be found. The median incision was then resorted to and the head of the colon was a considerable distance from the abdominal wall and forming the anterior wall of a pus cavity. The general peritonitis had originated from a leakage from this cavity. Five or six ounces of pus were evacuated and the patient recovered.

The case reported was treated as one of general suppurative peritonitis and the pus could not have been reached by opening the abdomen laterally.

Dr. Meisenbach.—Did you find pus in the abdominal cavity?

Dr. Laidley.—I did; peritoneal fluid and pus. I expect the patient will die, but I gave her the best chance for recovery.

ABSTRACTS

MEDICINE.

Microbes and Indigestion.—Modern research have shown that a great share of the symptoms connected with the disorders of digestion are due to the action of germs which decompose the food, producing various poisonous substances. Lactic, acetic and butyric acids, indol, skatol, creasote and ptomaines of various sorts are a few of the numerous irritating and poisonous substances which are developed in the stomach and intestines through the action of microbes upon the food. These substances not only irritate the stomach, producing soreness of the stomach, heart-burn, water-brash, regurgitation of the food, and other symptoms of local irritation, but through reflex action

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give rise, also, to pain and irritation in other parts, pain in the back, so-called spinal irritation, pain beneath the shoulder-blades and in the region of the heart, neuralgia and sick headache. Migraine, or nervous headache, and a great variety of similar pains are almost uniformly due to this cause. When absorbed into the blood, these poisons give rise to a great variety of distressing symptoms, such as vertigo, dulness of mind, confusion of thought, inability to concentrate the mind, disturbance of vision of various sorts, specks before the eyes, blurred vision, sometimes even sudden attacks of unconsciousness or nervous apoplexy, numb, prickling, crawling, tingling, and other disturbances of sensation, often regarded as indications of approaching paralysis. Every organ and function of the body may be disturbed by these poisons.

So-called biliousness is the result, and the liver is charged with being torpid. Brickdust and other sediments appear in the urine. The disturbance in the secretions gives rise to biliary calculi, gall-stones and renal colic. Even calculi, or stone in the bladder, catarrh of the stomach, catarrh of the bowels, catarrh of the bile ducts, with resulting jaundice, also result from the disturbing action of germs in the stomach and intestines. This is, doubtless, also, one of the most frequent and potent cases of Bright's disease of the kidneys. Distention of the stomach and bowels with gas, heaviness at the stomach, palpitation of the heart and so-called nervous asthma, are other symptoms which are directly traceable to the same cause.

A cream colored or brownish coat upon the tongue, with the accompanying "nasty" taste in the mouth, and foul breath, is the result of a growth of germs upon the tongue and in the secretions of the mouth, and is indicative of a similar condition in the stomach.

These and other facts have been very clearly pointed out by Bouchard, the eminent French physiologist, whose work in this direction has wrought a revolution in the method of dealing with some of the most common and obstinate maladies which the physician has to encounter. Recent biological investigations have shown that the work of microbes begins in the stomach, and that any efficient means of ridding the alimentary canal of microbes must begin with the stomach. The most important means of accomplishing this is a proper regulation of the diet. Cheese, game, fish or other meats with a "high" flavor, and unsterilized milk, contain germs in great quantities, and encourage the foul and septic condition of the stomach; hence should be discarded. The diet should be as largely as possible confined to such foods as do not readily decompose. In a case of sour stomach, sugar and sweet foods should be especially avoided. In case of headache and biliousness, avoid meats, milk, cream, butter, and all greasy foods. Make the diet of fruits and grains. Eat mostly dry food, such as requires thorough mastication. Avoid tea and coffee; take nothing at meals except filtered hot water, or caramel or digestive coffee; avoid especially cold water and iced drinks, and increase the time between the meals to seven hours. It is better to take but two meals a day, thus giving the stomach time for rest. If three meals are taken, two of them should be very light, and consist only of the most digestible foods.

After regulating the dietary, the next most important measure for the immediate relief of the symptoms described, is the employment of intestinal antiseptics. A great number of remedies, such as creasote, naphthol, salol, salicylate of soda, salicylate of bismuth, subgallate of bismuth, etc., have been recommended for this purpose. All of these, however, are open to more or less serious objection. Some of them are so soluble that they are readily dissolved and absorbed into the blood, and produce systemic effects, besides taking the kidneys for elimination. Others, as the salicylate and the subgallate of bismuth, produce constipation, and hence are applicable only to a very limited number of cases.

An old fashioned remedy, sulphur, has proved to be, in the experience of the writer, one of the best of intestinal antiseptics. It is not absorbed to any appreciable extent, is tasteless, but it is, nevertheless, very efficient in destroying or preventing the development of intestinal microbes. Charcoal, another old-fashioned remedy, is not only an antiseptic but also a disinfectant. It at the same time checks the growth of microbes, and absorbs and destroys the poisons which have been produced by them. A combination of the two, to which is added a preparation of diastose, has proven a most effective means of combating the microbes of the stomach.

A number of years ago, the writer made a large number of experiments for the purpose of determining the relative value of charcoal from different sources. A charcoal prepared from a cereal product was found to be the most satisfactory of all, and much superior to the ordinary willow charcoal.

The great objection to the use of charcoal has been the inconvenience of taking it. After many experiments the writer has succeeded in combining the ingredients named, in the form of very palatable tablets, which can be taken as easily as a caramel, and if not quite so palatable as caramels, are, to say the least, not disagreeable, and to most palates are very pleasant. From one to three tablets taken after each meal prove serviceable in each of the following ways:

1. In arresting the development of microbes in the stomach and intestines.

2. In the absorption and destruction of the poisons produced by microbes.

3. In assisting the digestion of starch, and through the prevention of fermentation and other forms of decomposition of the food, aiding all the processes of digestion.

4. In the relief of constipation.

Through the attainment of the several excellent results enumerated, intestinal antisepsis, in combination with a proper dietary and correct habits of life, will nearly always bring relief to persons suffering from the

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symptoms above enumerated. I must not, however, omit to mention out of door exercises as a most effective means of combating the disease, if practiced systematically.—*Mod. Med. and Bact. Rev.*

Insanity Produced by the Abuse of Ganga (Indian Hemp).—Cases of toxic insanity due to hemp drugs appear to be rarely fatal, and as regards the general appearance of the various organs of the body, and especially with regard to coarse lesions of the brain, these cases show nothing which could be ascribed to the action of ganga more than to other causes present. It is probable that as the insanity produced by ganga is never very prolonged, the hyperemia occurred during the stage of excitement leaves no permanent mark on the brain-tissue or membranes.

In conclusion, the writer believes that hemp drugs are largely used in Bengal, smoked as ganga and churrus, drunk as bhang and siddhi, or eaten as mujum. The smoking of churrus and the eating of majum are not very common.

Among healthy persons ganga smoked alone, with tobacco, or with a very small addition of datura (two or three seeds), produces a condition varying from mild exhilaration to marked intoxication. The violent intoxicating effects are less marked, or not seen at all, in persons having a regular and wholesome supply of food. Much the same may be said of bhang, etc.

Among persons of weak mind, or with a marked neurotic tendency, even a moderate quantity, or only a slight excess of hemp drugs, may so increase the insanity, evident or latent, as to make such persons violent, morose, or melancholy, according to the neuropathy with which we start. The presence of adulterations such as datura will increase these effects.

Abuse of hemp drugs, especially when adulterated with datura, will produce, even in healthy persons, a very violent intoxication simulating mania, or may lead to a morose, melancholic condition, or to dementia. These conditions are generally of short duration, and the patient ultimately recovers. So common is absolute recovery that the writer thinks that when a patient confined in an asylum for the treatment of insanity, said to be due to the abuse of hemp drugs, does not recover within ten months, those drugs were possibly only the exciting cause, and we are dealing with an individual who was either insane previous to his use of intoxicating drugs, or with one in whom latent insanity has been roused into activity by the vitiating effects of ganga, bhang, etc.—Tull-Walsh, in *Indian Medical Gazette.*

A New Method of Treatment of Acid Dyspepsia.—Although the pathological anatomist gives several explanations for acid dyspepsia, we must, when considering the treatment of such cases look upon them as classed under one head, and as being a condition in which there is present an excessive amount of acids in the stomach.

In all cases, excepting those in which there is a fermentation in the stomach, the increased amount of acids can generally be referred to the blood. A certain degree of alkalinity is necessary for the proper nourishment of the tissues, and every surplus of acid in the blood is led into the stomach. The author cites experimental results, which go to prove this statement. Thus, it is a well known fact that acid dyspepsia is an almost constant companion of the diseases of the acid diathesis, such as gout, chronic rheumatism, diabetes, etc. The system relieves the blood of the injurious acid and leads it to that organ, in which it is most apt to prove of use to the animal economy, viz., to the stomach, where it can act as a digestive agent.

But this curative property of nature is frustrated by complication arising from the saliva. This secretion loses its normal reaction, turning acid, when the alkalinity of the blood is reduced. But an acid saliva can not fulfill all the functions of a normal salivary secretion, in as far as it can not neutralize any excess of acid in the stomach, as the normal saliva does. And in all cases of acid dyspepsia, not dependant on any diathesis, the saliva is not sufficiently alkaline if it is not acid in reaction.

These considerations compel us to seek a substitute for the saliva in the treatment of such cases—some substance which will neutralize any surplus acid in the stomach. Bicarbonate of soda and magnesia have been used, but fail to do good in a great many cases. Boas has shown that twelve grains of bicarbonate of soda are necessary to neutralize a gastric juice containing three per cent hydrochloric acid.

The administration of such a quantity of drug is impracticable, if only for mechanical reasons. And, in fact, such a dose is very rarely, if ever, given, as patients are generally told to take "as much as will go in the point of a knife," which is, to say the least, a very indefinite quantity. The author, therefore, was led to look to the saliva, rather than to the gastric juice as the proper place to apply treatment. The saliva must regain a sufficiently alkaline reaction.

Now, saliva is not a transudation from the blood, but is a secretion produced by the specific activity of the cells of the salivary glands. What we need, then, is a stimulus to this glandular activity, and we find that the most active physiological stimulus to the salivary glands is the act of mastication. And, indeed, it has been clearly shown that the saliva, during mastication, has an alkaline reaction in every instance.

And this corresponds exactly with the experience that the symptoms due to hyperacidity disappear while the patient is eating, but reappear sometime after the meal, during the period of digestion. During the meal the act of mastication calls forth a copious flow of alkaline saliva, which neutralizes the surplus acid in the stomach, and thereby prevents the appearance of any symptom. In the period of digestion, however, during which time there is no mastication, the secretion of saliva is arrested, and consequently the surplus acid is

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not neutralized, and therefore causes the troublesome symptoms. And yet, this beneficial regulating quality of saliva is needed most during this particular period.

These considerations have led the autnor to have such patients chew continuously during the period of digestion, and he has had remarkable results in every instance. After having tried several substances as masticatories he finally had tablets made up of some sub stance suitable for chewing, and used as adjuvants ginger and calamus roots and magnesia.

The excellent results the author has had from this line of treatment have convinced him that his explanations, as given above, are correct, and he believes that the simplicity and efficacy of such a treatment should recommend its use to physicians in general.—Dr. J. Bergmann in, *Berl. Klin. Woch.; Amer. Medico-Surg. Bulletin.*

Pilocarpin in Croup.—Dr. Sziklai strongly recommends the use of pilocarpin as a specific in all cases in which the mucous membrane becomes covered with a transudate apt to coagulate. The abundant secretion of mucus produced by the pilocarpin tends to loosen the fibrinous exudate adherent to the membrane, and it is readily expelled from the larynx. The pilocarpin not only assists in dissolving and removing the membrane present, but also tends to prevent its reforming. It can be administered to children from 1 to 3 years old in doses of 0.01 to 0.03 grammes; 3 to 6 years 0.3 to 0.04 grammes; 6 to 10 years 0.05 grammes; 10 to 15 years 0.06 to 0.07 grammes; adults 0.07 to 0 1 grammes. The author concludes as follows:

1. Pilocarpin is a specific for croup.
2. The therapeutic action of pilocarpin manifests itself almost immediately; the cure of croup follows in a few hours; pneumonia is cured in two or three days.
3. The effect is the same, whether the remedy is administered subcutaneously or by the mouth. In case of necessity one may have recourse to suppositories or vaginal bougies.
4. Subconjunctival injections are preferable to other methods where there is imminent danger of death, or where the membrane is very extensive.
5. Pilocarpin not only abridges the course of the disease but prevents a fatal issue.
6. Administered early it also acts as a prophylactic.
7. It can be administered in twice the officinal doses without danger.—*Wien. Med. Wochenschrift; Occid. Med. Times.*

Sinus Thrombosis.—Dr. Jansen reported 12 cases of thrombosis of the lateral sinus in Lucae's Clinic, in 1893. In 2 there was suppuration of the bulb, only; in 1 thrombosis of the cavernous and superior petrosal sinuses. In the 9 others the transverse sinus was involved, six times together with the jugular, and twice with the cavernous sinus. The author thought from these statistics that it might be possible by early and energetic operative procedure to limit the thrombosis to the transverse sinus, or to have only an isolated thrombosis of the bulb of the jugular to deal with. The chief dangers in sinus thrombosis are metastases in the lungs, and purulent arachnitis; but these vary in frequency according to the sinus affected. In cases of jugular thrombosis, pyemia and metastases occur in 76.5 per cent; in transverse sinus thrombosis in 35.5 per cent; in inferior petrosal sinus thrombosis in 30 per cent; in cavernous sinus thrombosis not at all. Pyemia, through osteo-phlebitis without involvement of a large portion of the vein, is, according to the author's experience, very rare. When pyemia persists after a mastoid operation, thrombosis of a large portion of a vein should be suspected. In pure sinus thrombosis without degeneration, symptoms may be completely wanting. The most important symptoms are pyemia fever, with chills and metastases optic neuritis, signs of meningeal irritation, and signs on the part of the jugular veins. Of particular importance is the abscess outside of the sinus, whose early diagnosis, though difficult, is of great practical value, as by emptying it the formation or the purulent degeneration of a thrombosis may be prevented. The speaker thought that thombosis limited to the sinus should be operated upon only in the sinus.—*Archives of Otology; Occid. Med. Times.*

SURGERY.

The Treatment of Secondary Hemorrhage from the Arteries of the Upper Extremity.—The May number of the *Medical Chronicle* contains an article on this subject by John E. Platt, F.R.C.S., of London, in which the author relates the histories of four cases in which he has been called upon to treat secondary hemorrhage from the arteries of the upper extremity. Three of the cases were examples of secondary hemorrhage from wounds dividing the radial and ulnar arteries and the superficial palmar arch respectively, and the fourth was a case of hemorrhage from ulceration into the brachial artery. The first case was that of a man with a wound of the wrist dividing the ulnar artery. Secondary hemorrhage had occurred on two occasions. No suppuration had taken place, and the ends of the vessel were readily found and ligated. The second was that of a man with a wound of the superficial palmar arch from which there had twice been secondary hemorrhage. The wound was aseptic and the author found a small puncture in the superficial palmar arch. He applied a ligature on each side of the puncture, and also ligated one of the digital branches which arose close to it. There was no further hemorrhage in either case, and the wounds healed without suppuration.

The other cases were examples of hemorrhage from arteries in sloughy wounds, and the treatment adopted by Mr. Platt was a modification of that usually employed. The first case was that of a young woman who

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had sustained a wound of the thumb which had been followed by enlargement and suppuration of one of the lymphatic glands lying near the termination of the brachial artery. The abscess was opened and four days later hemorrhage occurred from the cavity. It was not very profuse, but, as it recurred on the following day, the author decided to place the patient under an anesthetic and explore the cavity. He found that the bleeding came from a small branch of the brachial artery, which had been opened by ulceration close to the main trunk. It was not possible to ligate the branch, and two silk ligatures were therefore placed on the main trunk, one on each side of the bleeding point. The wound was washed out with an antiseptic lotion and a drainage-tube inserted. The author thinks that he made a mistake in using silk ligatures; the wound being septic, the ligatures would also become septic, he says, and would therefore have to cut through the vessel and come away before the wound could heal, during which process there would be considerable danger of recurrence of the hemorrhage. This, says Mr. Platt, was exactly what happened. For thirteen days after the operation all apparently progressed well, but after that period the hemorrhage returned, and it was necessary to adopt further measures. Plugging the wound would have been useless, for the collateral circulation, if free enough to prevent gangrene of the limb, would have caused a return of the hemorrhage. It was, moreover, impossible to ligate the bleeding point again, for the walls of the vessel were too soft to hold a ligature. After careful consideration the author decided to open up the wound, to trace the artery upward and downward until perfectly healthy parts were reached, to remove the suppurating portion of the vessel, and, in order to prevent any further trouble from ligatures. to twist the divided ends. The wound was consequently enlarged and the artery exposed. It was in a sloughy condition, especially in the neighborhood of the distal ligature; this was freed and the whole of the diseased vessel removed. This, says Mr. Platt, was a greater undertaking than he had expected, for he found it necessary to take away four inches of the vessel. The divided ends of the main trunk were twisted, as were also a few small branches which arose from it. From this time the patient made an uninterrupted recovery, the circulation in the distal part of the limb returned almost immediately, and the wound healed completely in about three weeks. The patient at the present time, says Mr. Platt, is perfectly well; the cicatrix is sound, and there is no interference with the usefulness of the limb. Two enlarged collateral vessels can be felt pulsating near the elbow, one near the external and the other near the internal condyle, but only a very faint pulse is percertible in the radial artery.

The fourth case was that of a man who had cut his wrist with a piece of glass; the radial artery was punctured, but not completely divided. The bleeding was said to have lasted for five hours, although pressure was applied. The hemorrhage returned on the three following days and he was very anemic; moreover, owing to the great amount of local pressure which had been applied, there was a large sloughy wound just above the wrist. It was impossible, says Mr. Platt, to secure the vessel satisfactorily in the midst of this slough, and he therefore adopted the procedure which had been employed in the preceding case. The vessel was cut down upon just above the wound and divided, and the upper end twisted. Following th vessel downward, a healthy portion was reached in the space between the extensor primi internodii and the extensor secundi internodii pollicis, in which situation it was divided and the lower end twisted. From this time, says the author, the man had no further trouble, although the healing of the wound took several weeks. The length of the vessel was two inches and three quarters, and its walls were in a sloughy condition.

Mr. Platt thinks that this method of treatment is one which may be adopted with advantage in dealing with certain cases of hemorrhage from sloughy arteries, especially in the upper extremity. In such cases, he says, it is useless to temporize; the bleeding is almost certain to recur, and the longer we wait the more extensively will the artery be diseased. Ligation of the main trunk higher up the limb is almost sure to fail, for if the collateral circulation is free enough to prevent gangrene, it will, in all probability, be free enough to cause recurrence of the hemorrhage. Ligation of the softened vessel is difficut and unreliable. The best treatment, says the author, appears to be by ligation or torsion of a healthy portion of the vessel on each side of the bleeding point, and of the two, he gives preference to torsion, as it leaves no foreign body in the wound. The objection to this method, that it opens up the planes of cellular tissue further, is, the author thinks, far outweighed by the advantages. As the wound is freely opened up, the greater part of the sloughy tissue can be removed, proper drainage can be provided, and suitable agents can be applied to excite healthy action. With regard to the case of the brachial artery, Mr. Platt expresses the opinion that if prompt measures had not been taken in dealing with the suppurating vessel, the case would have ended in amputation.—*New York Medical Journal.*

Bloodletting in Over-Distention of the Right Heart.—J. E. Atkinson, of Baltimore, writes an article for the *Maryland Medical Journal*, with this title.

It is not the purpose of the author to inquire here whether we of the present have not been in error in almost completely rejecting the accumulated experience of generations of trained men. It may be that in our nearly universal abandonment of the lancet in inflammatory diseases we have neglected a valuable therapeutic measure. In the present instance the author calls attention to a phase of bloodletting in which it is of the highest, at times of lifesaving, usefulness,—that is, the mechanical relief to be afforded by the abstraction of blood in cases where the right side of the heart be-

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comes engorged and over distended in consequence of increased obstruction to the flow of blood through the lungs or left side of the heart, a condition not rarely observed in intense bronchitis, especially when complicating emphysema, in pulmonary edema, and in incompetence of the mitral valve or stenosis of the mitral orifice.

It is not suggested, however, that all cases of this character are to be benefited by this procedure. In ordinary mitral disease, for example, as hypertrophy gradually yields to dilatation and degeneration of the cardiac muscle, engorgement and dilatation of the right heart inevitably ensue, and sooner or later become extreme. In such cases venesection may entirely fail to afford relief, because the weakened and degenerated ventricular wall will have become quite incompetent to avail itself of the assistance offered it.

The conditions are quite different, however, when a dilated and weakened, though still competent, right ventricle becomes over-distended by a sudden increase in the resistance to its systole, through a rapidly developing intense bronchitis in an emphysematous patient, or an onset of pulmonary edema or a violent overtaxing of the powers of the left ventricle. Here the right ventricle becomes within a short time greatly over distended and quite incompetent to overcome the resistance in front so as to empty its chamber. Its suddenly developed feebleness is out of proportion to that of the other ventricle. The blood-supply to the arteries is diminished, while the whole venous system becomes surcharged with blood. Characteristic symptoms quickly appear. The ventricular systole becomes enormously increased in frequency, but diminished in force. Arterial anemia is shown by the frequent, compressible, unequal, and irregular pulse, venous hyperemia by cyanosis, hepatic engorgement, dyspnea, sweating, etc.

If relief is not afforded, the patient may die speedily —asphyxiated. Here the morbid condition is evident, the therapeutic indication equally so. A stretched muscle contracts imperfectly. By diverting a portion of the torent of blood that is pouring into it, we give the stretched ventricle a chance to recover its tone, and it will enter with renewed vigor upon its functions, the systole becomes efficient, and the dammed-up blood will find a vent into the left heart and arteries, and relief more or less permanent will be afforded.

In many cases, as in advanced mitral insufficiency or stenosis, this will be transitory, but in cases of pulmonary edema and engorgement, etc., brilliant results may occasionally be obtained.

As the blood flows from the arm the patient will at once be sensible of great relief, cyanosis will diminish, dyspnea will subside, the pulse may be felt to grow slow, more regular, and fuller, and before the flow has stopped he will often fall into quiet sleep. From one to two pints of blood may be abstracted with safety. Given pronounced evidence of over-distention of the right ventricle, quickness and feebleness of the pulse may be disregarded; with each ounce of blood abstracted improvement of cardiac tone and general condition may be expected.

At the meeting of the Pan-American Congress the writer read a paper on this subject, and related a case of the remarkable results of venesection in engorgement of the right heart. The patient recovered so as to be able to resume his very active business, and only succumbed to his cardiac disease within a few months, four and a half years later. Since then he has had several opportunities to practice the operation with excellent results, and in one instance to snatch a patient from the very jaws of death. The case is as follows:

On the evening of November, 19, 1893, the author was summoned hurriedly by her husband to see Mrs. D., who informed me that he thought she was already dead. He reached the house quickly, and found her a well-nourished woman of middle age, supported in a chair by her attendants. She was cyanosed to the last degree and had ceased to breathe. A mass of white foam protruded from her lips and each nostril. Her heart was still pulsating and her radial pulse could be felt. As he watched, a gasping movement of the lips was observed.

At once she was placed upon the floor, her dress and corsets loosened, and artificial respiration begun. Much frothy mucus was expelled by the compression of her chest, but no voluntary respiration was evident at first. Immediately bleeding from the arm was instituted, artificial respiration being continued. After about a half-pint of blood had flowed, imperfect efforts at respiration were resumed, and voluntary respiration became established after a pint of blood had been abstracted. The pulse became very full and frequent, but she remained unconscious for more than a half-hour. Cyanosis gradually disappeared, and in an hour she had regained her natural color.

Upon examination, a pronounced mitral systolic murmur, with considerable ventricular hypertrophy, was detected. Repeated tests, her family physician stated, had revealed no kidney-disease. She slowly recovered from the effects of her attack and is to day in fairly good health.

It was learned that she had not felt well during the day, but at eight o'clock had dressed in corsets and street dress and had gone out for a walk with her husband. At some distance from home she had been seized with dyspnea and had fallen in the street. After some delay and after she had become unconscious she was brought home in a cab. Within a few moments after her arrival, Atkinson saw her. During all this time her body was confined by her dress. It was evident that the exercise of walking (she was quite a stout woman) had violently excited the action of an already damaged heart, with the result of inducing a very acute edema of the lungs, with rapid effusion into the bronchial tubes and over-distention of the right side of her heart. When seen by the writer she was completely asphyxiated.

The re-establishment of respiration by artificial means and the abstraction of a pint of blood enabled her heart

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to recover from the surprise into which it had been thrown and to resume the function for which it was ordinarily quite competent.—*Ther. Gaz.*

Treatment of Lupus.—Schutz (*Arch. f. Dermat. u. Syph*) treats lupus vulgaris as follows:

After the administration of chloroform all the friable tissue is scraped away with the sharp spoon; then the floor of the wound and the borders to a distance of one centimeter are scarified. When the bleeding has been stopped, the wound is dabbed over several times with a cold saturated alcoholic solution of chloride of zinc, to which a little hydrochloric acid has been added. During the ensuing six hours sharp pain is felt, which may be mitigated by the application of iced compresses. Before twelve hours have passed, local swelling comes on, with edema, more or less pronounced, of the neighboring parts. Compresses of boric acid disperse this edema in thirty-six hours and cleanse the wound. For four days afterwards a dressing of pyrogallic acid (1 in 4) in vaseline is applied three times a day; then boric acid compresses, frequently changed, are substituted for this dressing. After five days of these compresses, the dressing of pyrogallic acid in vaseline is again resorted to and continued for four days; then boric compresses are applied again for three days; lastly, a final application of pyrogallic acid and vaseline is made for two to three days. Cicatrization is rapidly obtained by the use of iodoform in powder or of boracic acid in vaseline. The duration of treatment is from two and a half to three months, and an excellent looking scar is the result. Recurrence may take place at one or two points. If so, the nodules must be scraped away with the sharp spoon and chloride of zinc applied. The author claims that the results of this treatment are more satisfactory than those of any other plan known to him. The treatment is applicable to lupus of the skin; for that of mucous membrane in readily accessible situations, such as the gums and the uvula, Schutz recommends applications of a watery solution (twenty to thirty per cent) of chloride of zinc.—*Brit. Med. Jour.*

Tizzoni's Antitoxin in Tetanus.—Bauer (*Weiner Klin. Woch.*) reports the case of a laborer, aged 26, who was admitted into the hospital at 8 P.M. on July 12. Eight days previously the sole of the right foot had been wounded by the entrance of a splinter. The injury was dressed at the time. On July 11 he first experienced tugging pains in the masticatory muscles. On the 12th he became unable to swallow, and cramps of the neck muscles appeard. He was a middle sized, powerfully muscular man, with moderate adipose tissue. On admission, temperature 36.8° C., pulse 78, respiration 30; complains of thirst; pupils contracted, equal, and reacting promptly. Head strongly bent backward and drawn to the left. Unable to separate jaws widely; tonic contraction of masseters; tongue clean, moist, freely movable. A triangular, funnel-shaped wound of right sole, with pent-up pus, the skin around infiltrated and painful. Edema of the dorsum of both feet. The wound was probed, enlarged and cleansed, much ichorous pus draining away. Iodoform gauze introduced, and bandaged applied. July 13 passed a quiet night. At 8 A.M. convulsions appeared. Head bent back and rotated to the left, and rigidly fixed. Upper part of trunk rigid, legs extended. The eye muscles, masseters and neck muscles all tonically contracted. Mouth could be opened one centimeter with difficulty. Lips and angle of mouth drawn on both sides, giving a sardonic expression. All the trunk muscles rigidly contracted, except shoulder and arms. Arms strongly flexed at the elbows and knees at an obtuse angle. Articulations of hand and fingers also flexed. Face and neck covered with beads of perspiration. The tendon reflexes much increased, the slightest touch eliciting convulsions. Temperature 36.8° C., pulse 84, soft, tension diminished. Urine examined; no albumin, no sugar. At 10 A.M. an enema of chloral hydrate (30 grains) was given, producing immediately a diminution of reflex irritability and some desire for sleep. At 4 P.M. the rigidity of upper extremity was more marked, eyes remain closed, expression more rigid. Tonic contraction of all the facial and neck muscles; arms abducted and strongly flexed. Since 10 A.M. ten attacks of convulsions occurred. Occasionally minor attacks occurred, which increased in intensity till the patient's head was jerked to the middle of his bed, and his feet shot right out of it. Much cyanosis during these and cries of pain. Pulse 90, respiration 60, chiefly abdominal. Urine clear at first, becoming turbid with phosphatic deposit, ammoniacal odor, no albumin nor nucleo-albumin. At 5 P.M. 2.25 grammes of Tizzoni's original antitoxin were injected, but at 6 P.M. five general convulsions of greater intensity occurred, followed by feebler attacks, affecting chiefly the upper thorax. At 12.15 A.M. of July 14, 30 grains more chloral were given by enema, but notwithstanding three violent convulsions followed. Examination of the urine after the antitoxin injection gave the nucleo-albumin reaction. At 1.30 A.M. patient died in a severe attack, probably owing to spasm of the diaphragm. At the necropsy, the thyroid was found enlarged, the right lobe cystic, the left colloid. Both lungs much distended, full of blood, and soddened, with scattered slight hemorrhages in their substance. A copious frothy fluid exuded from the bronchi, which, in the lower lobes, were dilated and contained a tenacious mucus. Heart of normal size, right ventricle flaccid, left contracted, openings and valves normal, heart-muscle pallied, reddish-gray, rotten. Pleura and pericardium ecchymosed. Liver enlarged, somewhat congested. Spleen enlarged, soft; the pulp dark red and shreddy. Kidneys large, flaccid, congested; surfaces studded with clusters of venules. On section, cortex swollen and granular, pyramids dark-red. Cerebral membranes congested, otherwise unaltered; brain cortex reddish violet; the medullary substance soddened and interspersed with very numerous puncta cruenta, the ventricles contracted. The author, in summing up, comments on the severe

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character of the case, and expresses a doubt whether the hitherto successfully treated cases have not been of a more chronic character.—*Brit. Med. Jour.*

OBSTETRICS AND GYNECOLOGY.

Diabetes Insipidus Graviditum.—Diabetes is a rare complication during pregnancy, and the insipidus form still rarer; it therefore merits special mention in the exceptional cases in which it occurs. The attention of the profession was first called to this complication of pregnancy by Dr. Mattews-Duncan, through a paper on "Puerperal Diabetes," published in the twenty-fourth volume of the Obstetrical Transactions, page 256, where he reports fifteen cases, all of which, however, are of the saccharine variety. The only reference I have been able to find, in any systematic work on medicine, of the insipidus form occurring during pregnancy is in Pepper's System, Vol. iv., p. 31, where the writer states that it is known to have ceased two days after delivery, and in another case after lactation was fully established. That diabetes would be a complication of pregnancy in proper subjects, is not surprising when we consider how reflexly, mechanically and hemetically the kidneys are effected in pregnancy; most commonly in another form, namely, albuminuria, and it should be a matter of congratulation when we consider its greater variety, unmanageableness and fatality.

Mrs. W., aged 21, German-American, is a slender anemic young woman at the end of the seventh month of her first pregnancy. While of healthy parentage, she herself has always been sickly, nervous and troubled with headaches. She has enjoyed her usual health and suffered no annoying symptoms of pregnancy.

Early this morning, (end of May), she was taken with a severe pain in the right loin running down into the hypogastric region along the course of the right ureter; spasmodic in character, attended with the passage of dark colored, clear urine (urates). No constitutional symptoms; has her usual headache, is costive and has some edema of the feet. Urine s.g. 1015, of acid reaction and otherwise negative. I made a diagnosis of gravel, and ordered a cathartic and diuretic mixture; next day she was relieved of all her symptoms but was thirsty and passing more urine than before the attack; both of these latter symptoms were thought to be due to the diuretic mixture containing sweet spirits of nitre and spiritus Mindereri. She rapidly regained her usual state of health, except there was now added great and unquenchable thirst and the frequent passage of large quantities of limpid urine which also disturbed her rest. Abdomen not unusually prominent; child lively; temperature normal; pulse 100 and regular; skin pale and dry. Urine pale, and limpid in appearance, like spring water, s.g. 1000, of acid reaction, no albumin or sugar; diagnosis readily made of diabetes insipidus, family informed of condition, and proper measures instituted as to surroundings, clothing, diet, or rather drink, and prescribed valerianate of ammonia as the medicine. Nothing however modified the course of the disease, though a morphine colic mixture seemed to lessen the thirst and consequently urination; she drinking as much as forty glasses of fluid in twenty-four hours, and passing four chamber vessels full of urine during the same time —stools became hard and dry; child alive and in L.O.A. position by external examination. The urine all the while being of s.g. 1000–2, acid, but otherwise negative.

At the expected time she was delivered of a good sized, live male child after a normal labor; a large quantity of liquor amnii escaping. Immediately after the labor I began administering half drachm doses of the fluid extract of ergot every three hours.

Next day her symptoms had markedly subsided, her thirst to two drinks through the night, no puerperal symptoms, ergot continued. Next day she began perspiring, the first since thirst began; only drank sixteen glassfuls in the twenty-four hours, and urine correspondingly reduced in quantity. No puerperal symptoms appeared, neither was there any appearance of milk in the breasts. Slight intercurrent attack of intermittent fever on the seventh day after confinement, readily controlled with quinine in ordinary doses, and diabetic symptoms having subsided, stopped ergot. At the end of the puerperal month she presented only the usual symptoms of her ordinary health, and none whatever of diabetes, her urine being of normal color, s g. 1020, acid, and no albumin or sugar. The milk never appearing, she did not nurse her child. Two years later she passed through a second pregnancy unattended by any unnatural symptoms, and after confinement suckled the child.

Here we have a case in which the proper soil for the development of this complication is manifestly present, in a young person with a nervous diathesis, as shown by her constant headaches and excitable temperament, though not hysterical and, as is usual with diabetes insipidus, some peculiarity of the pregnancy, reflexly exciting it. Acute in the manner of its onset and ending, and uninfluenced by treatment, that of the morphine and ergot being more apparent than real. The quantity of the liquor amnii said to be a noticeable symptom of this complicated state, was not any more unusual than is often seen in cases of simple pregnancy, so that no stress can be laid on that symptom; but the suppression of the milk was probably due to the great loss of fluid her system sustained, not leaving sufficient to enable her to meet the needs of this section. The symptoms and diagnosis were, and are always, transparently apparent, those of the diabetes predominating. The pathology no different than when diabetes occurs alone, except the reflex cause being some condition about the pregnancy, as is shown by its cessation so quickly after labor, both in my case and the two mentioned in "Pepper." But the prognosis and treatment are both of a different character than when the condition occurs alone, and about on a

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par with that other uncommon reflex annoyance of pregnancy, constant vomiting. For when diabetes insipidus occurs early in pregnancy, is persistent and depressing as to endanger life; and when the use of some of the usual methods of treatment, ergot for instance, are as dangerous in that condition as the disease, we are shut up to the grave necessity of producing premature labor, but in the later months the prognosis is not so grave, for then the patient's strength being greater, she can be tided over, so that the pregnancy and sickness may both terminate safely as in the case I have reported.

As to treatment, I have no special suggestion to make; sustain the general condition, try the safe remedies recommended for this disease, and be prepared to relieve the patient if the necessity should arise. In this case the patient was allowed to drink all the proper fluid she desired, as it seemed to me inhuman torture to do otherwise and no harm from so doing. So that we now have added, to the usual urinary diseases of pregnancy of a nervous and renal character, that of diabetes in both its forms, due to reflex mechanical or hematic origin.—W. H. Haynes, M.D. in *Brooklyn Medical Journal.*

NOTES AND ITEMS

In Our Issue of May 18, 1895, page 398, by some oversight the name of J. G. LeGrand Cole, of Alabama, appeared as Second Vice-President of the American Medical Association. The name should be Jno. C. LeGrand, of Alabama.

The Plague is Quarantinable.—Under the last Regulations of the Treasury Department the diseases to be quarantined at ports of entry are cholera, yellow fever, typhus, variola, leprosy and the plague. The latter disease is now again rampant at Amoy, China, with fifteen deaths from that cause daily; so that the Pacific coast will have to be on the *qui vive.—Journ. Am. Med. Ass'n.*

Children of Young Mothers.—In a paper read before the Congress of Hygiene at Budapest, Professor Korosi, the well known statistician, stated that the proportion of deaths among children from weakly constitutions, or maladies traceable to the mother, was twice as large among the children of mothers under twenty as among the children of mothers over thirty, upon a comparison of several thousand cases.

Making Vaccination Odious.—If it be true, as reported, that two physicians of the New York City Board of Health recently vaccinated 1,000 children in nine hours, that is a fraction over 18 a minute, the following comment of the Bangor (Me.) *Commercial* is just and timely: "To say that vaccination could be properly performed at this reckless, break-neck rate is simply ridiculous. But possibly these eminent practitioners wanted to give the impression that vaccination is a humbug and did their work with that end in view."—*Jour. Amer. Med. Ass'n.*

Dr. Carl Thiersch, the eminent German surgeon, died on the 28th ult. at Leipzig, aged 73 years. He was a native of Bavaria and was educated at the University of Munich, graduating in 1846. He afterward resided successively in Berlin, Vienna and Paris. He was a frequent contributor to the literature of his profession, and the system of skin-grafting which he introduced is now generally adopted by surgeons throughout the world. He also wrote upon maxillary necrosis from phosphorus and upon Listerian methods in surgery.

A Philadelphia Incident.—The Philadelphia *Record* is authority for the following case of dislocation of the inferior maxilla. The *Record* calls Dr. Pancoast "a considerate physican:" "A downtown woman, who justly bears the reputation of a common scold, recently became so enraged at some action of her inoffensive husband that in endeavoring to do justice to her feelings she threw her jaw out of place. Of course, she was immediately silent and her husband, although he hurried with her to Dr. Pancoast's office, experienced a sensation he had not known for years, for he berated his wife soundly and received no words in reply. Perceiving that the woman was impatient to give her husband a scolding Dr. Pancoast purposely allowed her to wait for half an hour, while he attended to others, and then, telling the husband to get out, he threw the jaw back in place. However he placed a tight bandage under her chin and advised her to keep it there some time, in order to give the husband a much needed rest."—*Jour. Amer Med. Ass'n.*

Compulsory Vaccination.—Dr. Quine, of Chicago, in a paper read before the Illinois State Medical Society, reminded his hearers that vaccination was introduced to the attention of the medical profession by Edward Jenner, in 1798, as the result of investigations which extended over a period of twenty years (*Med. Rec.*). During the century preceding, according to the estimates of authoritative writers and statisticians, small-pox, "the most terrible of all the ministers of death," destroyed in Europe alone fifty million lives. Five hundred thousand deaths every year from the most loathsome pestilence known to man; thirteen hundred deaths every day, nearly a death every minute for a hundred years. If it be true, as is believed by enlightened people, that universal vaccination and revaccination, efficiently done, will put an end to all this desolation and horror from epidemics of small-pox, and finally eradicate the disease altogether, it would appear that the discoverer of vaccination is the greatest benefactor that mankind has known. Alexander was great. Cæsar was great. Hannibal was great. Napoleon was great.

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They were all great—as destroyers. What have they done? What have all the kings and potentates and warriors of earth done, in comparison with one member of the medical profession in the direction of adding to the sum total of human happiness and human life? Are such conceptions of the possibilities of vaccination an idle dream?

Operating Rooms and Laboratories at the Hospitals of Military Posts.—To the recent inspection of a number of military posts by Surgeon General Sternberg is probably due the issuance of the following circular of instruction in relation to antiseptic surgery and chemic and bacteriologic investigations:

It is presumed that medical officers are fully alive to the requirements of modern aseptic surgery, and even at isolated and frontier posts have, in operations they have been called upon to perform, carried out the principles of asepsis with the apparatus at hand.

In every post-hospital, a room should, if possible, be set aside as an operating room. Especial attention should be given at all times to the cleanliness of this room, including its walls and floors, as well as the necessary furniture. A stout table, of suitable size and plain finish, that can be easily scrubbed, should always be in readiness. In this room should be placed all the instruments and dressings, antiseptics, anesthetics and other applicances that may be needed in an emergency. While always accessible, they should be guarded from handling by irresponsible persons. The Arnold sterilizer and the boiler of the kitchen stove or range afford ready means for sterilizing instruments, dressings, basins, towels, etc., that may be needed at an operation.

At the large permanent posts, if no suitable room is available, plans and estimates should be forwarded for such changes in or addition to the hospital building as will provide a conveniently located operating room.

The Surgeon-General also desires that provision should be made for a small laboratory, in which the chemic and bacteriologic sets furnished can be conveniently arranged, so that they may be always ready for use. When apparatus furnished for diagnostic purposes or for use in the investigation of questions in pathology or hygiene is left in the store-room, unpacked or upon the shelves, the fact that it is at the post will often be overlooked, especially by junior officers who are not responsible for the property.

The following articles will be furnished, on requisition, to those posts at which the post surgeons report that a room is available for use as an operating room:

1 operating table.
1 table for instruments.
1 case for instruments.
1 cases for dressings, etc.
3 operating gowns for surgeons and assistants.
1 surgical cushion, Kelly's.
1 dozen tubes, Fowler's, catgut and silkworm gut, assorted sizes.
1 dozen spools, Halstead's, for silk ligature.
1 dozen brushes for cleansing.
1 kilo green soap.

ENAMELED WARE.

1 instrument boiler.	2 pitchers.
2 wash basins.	2 pails.
4 basins for sponges, etc.	2 trays for instruments.

GLASSWARE.

1 Petri's dishes for needles, etc.
2 small jars, covered, for ligatures, etc.
4 larger jars, covered, for dressings, etc.
6 flasks for flushing solutions.
6 one-gallon bottles, g. s., for antiseptic solutions.

Sanitary Supervision of Public and Private Hospitals.—Very delicate questions often arise between the sanitary authorities and the hospitals that receive a share of the municipal moneys. Nearly all superintendents of hospitals if left to themselves will decline to accept certain "troublesome cases," as noisy alcoholized persons. And they as well as the ambulance surgeons have been known to jump at a diagnosis of "drunk," when there was an unrecognized fracture at the base of the skull, plus a history of dissipation. In Brooklyn, complaints having been recently made to Health Commissioner Z. T. Emery, that deaths had taken place of persons consigned to the police precincts when they might have had a chance for their lives if brought under hospital treatment, he held conferences with the superintendents of the leading institutions, and others, with a view to preventing the future occurrence of avoidable "accidents" of the nature complained of. The superintendents were heard on their own behalf and on the behalf of their surgeons of ambulances. As a result it was determined that those hospitals of Brooklyn that partake of the excise funds shall be placed under a clearly defined set of regulations. These will be enforced to the best of his ability by the Commissioner, but his power of discipline over the institutions will probably be accepted without serious contest. The following list of special regulations has been served upon the various institutions: "Although the accusation of inhumanity, occasionally made against the hospital authorities and ambulance surgeons of this city, is generally undeserved, it must, nevertheless, be admitted that, unfortunately, such is not always the case, as there have come to my knowledge certain well authenticated instances of patients in a dying condition having been refused transportation by ambulance surgeons, and of others who have been denied admission to hospitals which are under contract with the city to care for the sick and poor. In order to diminish the possibility of the future occurrence of these deplorable mistakes, your attention is called to the following rules, which take effect immediately:

1. All ambulance surgeons must be appointed by the Commissioner of Health, but the condidates nomi-

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nated by the hospital superintendents will be accepted if they present satisfactory evidence of the possession of the proper qualifications for the position.

2. The hospital that is under contract with the city to treat the sick poor must maintain an emergency ward, containing not less than two beds, for the temporary reception of ambulance cases. This ward is to be used for no other purpose.

3. When an ambulance case is brought to a hospital from the latter's own district, the patient must be promptly admitted. Whether he shall be retained or not may be determined later.

4. Cases of grave injury or sickness must be admitted even when brought from another district.

5. Cases of delirium and insanity, when brought in an ambulance, must be admitted and cared for until they can be transferred to the department of charities.

6. Unless the free beds are all occupied, no application for hospital treatment is to be refused without a medical examination.—*Jour. Amer. Med. Ass'n.*

The Statistics of Suicide among the troops in India show that last year the number of self-caused deaths was exactly the same in the European as in the Native Army, twenty-two in each. This record is rather below the average, which, for the past decade, stands at twenty seven annually for the first named force and twenty four for the latter. The report that contains these particulars states very little beyond the bare figures and the manner in which death was caused in the different instances; so we are practically without information as to the causes which induce European or Native soldiers in this country to commit suicide. This much, however, is clear: that, contrary to the experience of Western nations, where the seasons have a marked and curious influence upon suicide, the time of the year has little or nothing to do with determining the reckless upon self slaughter. The percentage of deaths for the last ten years in the four periods of the three months into which the year is, for purposes of investigation, divided, are both in the European and Native troops, very nearly the same. But a difference appears, however, when age is made the basis of comparison. In the European branch of the army the proportion of suicides was greatest among men who ranged from 30 to 34 years of age, and who had seen from six to ten years' service. This is somewhat unexpected and shows that suicide at least is not one of the ills that can be laid to the charge of a short service army, or to which it is peculiarly liable. Among the Native troops the age-period is naturally lower, and cases of suicide are most common among men of from 20 to 24 years of age who have served with the colors from three to six years. We regret the entire absence from the tables of all information which might throw light upon the determining causes, so far as they can be ascertained, of suicide in the two armies. To know how many cases might be ascribed to religious mania, how many to disease and illhealth, how many to hysteria or mental strain, and so on, would not only be interesting, but would be invaluable information. It is very poor compensation to learn the number of deaths that occurred by gunshot, by hanging, or drowning; the information supplied is merely the record of a clerk, as it has no scientific aspect whatever.—*The Medical Reporter.*

The Status of Ether in Germany.—Bruns (*Berlin Med. Woch.*, No. 51, 1894), in commenting upon the steadily increasing popularity of ether in Germany—a popularity based on statistical study which shows how much safer this agent is than chloroform—calls attention to the fact that there is a beginning reaction in favor of the more dangerous agent on the part of a few surgeons, these men holding that, although Gurlt's statistics conclusively prove that the immediate danger of ether is many times less than that of chloroform, the remote danger is greater when ether is administered, and that from broncho pneumonia entirely due to the irritating effect of ether vapor upon the lungs, patients frequently perish who would have been saved had chloroform been employed. Thus, Czerny says that he frequently saw light cases of bronchitis and emphysema after ether narcosis. These usually cleared up quickly, but sometimes ran into serous bronchitis and bronchorrhea, and in some cases even into severe broncho-pneumonia. This last complication occurred in a number of patients who could not expectorate the mucus which accumulated in the throat because abdominal operations rendered coughing extremely painful. He states that he lost two patients on the eighth day from this cause, both these patients being entirely free from bronchitis before operation and the wound running a sterile course. Mikulicz, after a six months' trial of ether, abandoned it, because he observed a number of light cases of bronchitis and two cases of pneumonia. Poppert has described a case of ether death due to edema of the lungs, and has collected six other cases in which death occurred from lung congestion after etherization. Poppert ascribes all these deaths directly to the ether, and comes to the conclusion that if statistics were collected in which all the late effects rightly belonging to this agent were included, it would be found to be twice as dangerous as chloroform.—*Therapeutic Gazette.*

The United Society of Christian Endeavor and the National Young People's Christian Union will hold their Fourteenth International Convention at Boston, July 10 to 14, 1895. The Wabash Railroad has reduced the rate to one first-class fare for the round trip from all stations to Boston for this occasion. For maps of route and guide to Boston write to

C. S. CRANE,

General Passenger and Ticket Agent, St. Louis Mo.

The Price of Dr. Adolf Alt's book—"A Treatise on Ophthalmology, for the General Practitioner," has been reduced to $2 50 from $3.50. See advertisement on page 11.

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DISTURBANCES OF INNERVATION.—Robert B. McCall, M.D., Medical College of Ohio, Cincinnati, now residing at Hamersville, Ohio, writes:

"My confidence in antikamnia is so well established that I have only words of praise. Independently of other observers I have proved to my satisfaction its certain value as a promotor of parturition, whether typical, delayed or complicated, and its effectiveness in controlling the vomiting of pregnancy. In cases marked by unusual suffering in second stage, pains of nagging sort, frequent or separated by prolonged intervals, accompanied by nervous rigors and mental forebodings, one or two doses, three to five grains each of antikamnia promptly changes all this.

"If there is a 'sleepy uterus' antikamnia and quinine awake every energy, muscular and nervous, and push labor to an early safe conclusion. Indeed, in my case of labor small doses are helpful, confirming efforts of nature and shortening duration of process.

"I have just finished treatment of an obstinate case of vomiting in pregnancy. A week ago the first dose of antikamnia was given, nervous excitement, mental worry and gastric intolerance rapidly yielded. The case was a typical one and the result is clearly attributable to the masterful influence of your preparation.

"If there is any one drug or preparation that can be made to answer every need of the physician, for the correction of the multitudinous disturbances of innervation that occur in the various diseases he is called upon to treat that one is antikamnia."

SEASONABLE SUGGESTION.—No preparation with which we are acquainted is entitled to greater confidence as a remedy, in the treatment of the stomach and bowel derangements incident to the summer months, than Maltopepsine—Tilden's.

It is put up in three forms, viz.: Powder, handsome five-grain Tablets, and an elegant elixir; either of which is pleasant to the palate, and agreeable to the most delicate stomach.

It is specially adapted to the treatment of cholera infantum and ailments of a similar character peculiar to childhood. If you will give it a trial, we believe you will thank us for the suggestion.

THE NEW CATALOGUE of the Chloride of Silver Dry Cell Battery Co., of Baltimore, Maryland, is now ready for distribution, and we advise our readers to send four cents to that Company and secure a copy of same, for several new styles have been added to their list, and valuable improvements made on most of the others. The high reputation which the Chloride of Silver Batteries have gained is due to their many points of excellence, such as absolute cleanliness, disability, constancy, and the fact that they are dry, small and light. They certainly are the ideal portable battery for the medical practitioner. The Company manufacturing them also take great pride in their appearance, and spare no trouble or expense in making every instrument they send out a finished article, of which any physician may well feel proud to become the possessor. Large shipments of these batteries have been made during the past year to New Zealand, Australia, Batavia, and the British East Indies, where their merits will no doubt be as fully appreciated as they have been by the American Physicians.

CAPE MAY AS A HEALTH RESORT.—Albert E. Roussel, M.D., Assistant Professor of Practice and Clinical Medicine, Medico-Chirurgical College; Consulting Physician to the Temporary Home; Visiting Physician to the Howard Hospital, says:

As a summer resident of Cape May for some ten successive years, I have had a fairly-good opportunity of judging of its merits as a health resort, more particularly during the summer months.

During this period of time I have been especially impressed by the marked improvement manifested in that very large group of cases that are presumably benefited by a sea shore sojourn.

Curiously, however, there has undoubtedly existed a rather wide-spread impression that the relative humidity at this resort was higher than at some of its more populous rivals.

With the object of obtaining some definite data upon this subject I wrote for and procured the following interesting table from the Chief of the Weather Bureau at Washington.

UNITED STATES DEPARTMENT OF AGRICULTURE.
WEATHER BUREAU, Washington, D.C., April 25, 1895.
MARK W. HARRINGTON, Chief of Bureau.

MEAN RELATIVE HUMIDITY. PERCENTAGES.

	Jan.	Feb	Mar.	April	May	June	July.	Aug	Sept.	Oct.	Nov.	Dec	Annual.
Atlantic City, N J.	81.	79.	78.	77.	80.	83.	83	83.	82.	80.	79	80	80.
Cape May, N. J.	78.	77.	76.	75.	77.	79.	80.	81.	77.	75	73.	76.	77.

MONTHLY MEAN TEMPERATURE.

		Jan.	Feb.	Mar.	April	May	June	July.	Aug	Sept.	Oct.	Nov.	Dec.	Annual.
Cape May, N. J.		34.2	35 3	39 7	48.2	58.7	68 2	73.6	73 2	68.0	58 9	46 4	37.6	53.6
Atlantic City, N J.		31.7	33.1	37.9	46.5	57.0	66.7	72.3	72.0	67 2	57.1	44.6	35.6	51.8

As will be noticed from the table, the relative annual percentage of humidity is but 77, as compared with 80 for Atlantic City, and no one monthly average proves an exception to this general rule.

A study of the temperature-record is equally interesting. Although the mean annual temperature of Cape May is one and a fraction degrees higher than that of Atlantic City, yet it will be noted that the relative difference is but slightly marked during the summer and autumn months, but, on the contrary, is the most pronounced during the remaining portion of the year, which would only tend to emphasize the advantages of the Cape throughout the entire year.

This is especially true when we take into consideration the prevailing direction of the wind,—a point of no little importance during the summer season. On account of its insular position, the unwelcome land-breeze is a rare visitor, indeed, a direct northwest wind being alone responsible for its production.

Then, again, the manifest superiority of the magnificent beach, the absence of the particular crowds occasioned by cheap excursions, and last, but not least, the cleanly and well-kept streets must certainly appeal to those who seek health as well as recreation.—*Medical Bulletin.*

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Average Weekly Issue, 10,000 Average Monthly for th Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXXI. ST. LOUIS, JUNE 29, 1895 NO. 26.

ORIGINAL ARTICLES

Modification of Tait's and A. R. Simpson's Method of Perinæorrhaphy.

BY EGBERT FUNKHOUSER, M.D, ST. LOUIS, MO.

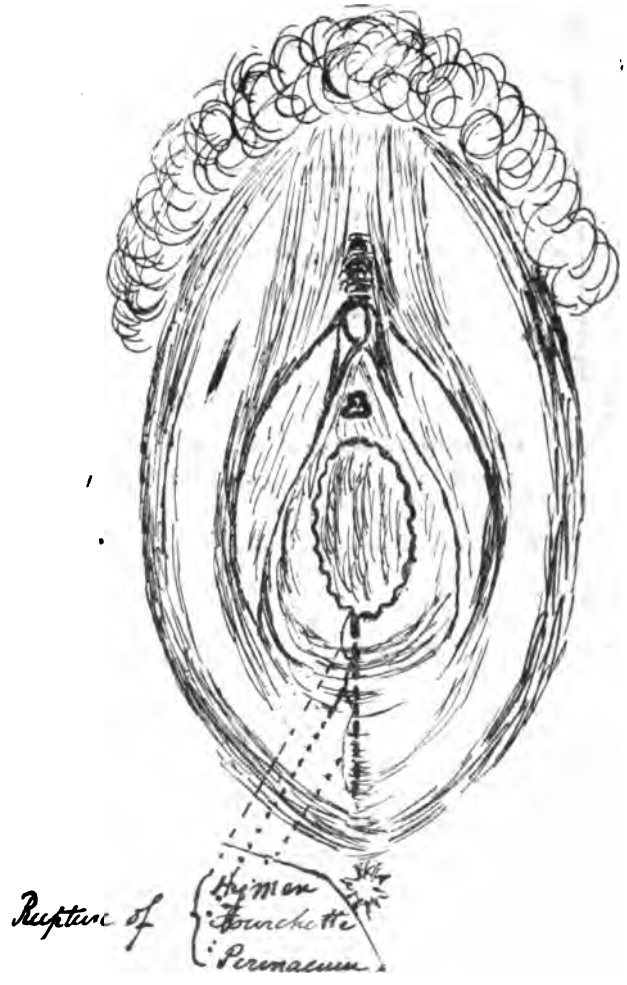
Read before the St. Louis Medical Society, April 27, 1895.

It is a significant fact, deduced from a comparative anatomical study of the reproductive organs, that woman, in the upright (natural) position, is the only organism that has no ligaments to support the uterus, while the uterus of every other class of mammalia, in their natural position, is kept in place by its own ligaments. The uterus of woman, it is true, has ligaments, but they have in reality little to do in keeping the organ *in situ*, in the upright position of the body. This is accomplished by the compact, unbroken pelvic floor. By some it is believed that the chief support is the vagina. The utero-sacral ligaments may assist in its support, but none of the other ligaments seem to do so. It is true that the perineum plays a very important role; it is, however, not the main and only one. Indeed, as important as a perfect perineum is, if not more so is an intact levator ani. When this muscle has lost its tonicity, or has been injured, as it is so frequently in its relation with the vagina and rectum as in torn perineum, the ill-effects are seen in rectocele and prolapse of the vagina and uterus.

The perineal body, though its importance may have been exaggerated by some and underrated by others, in an intact condition is doubtless of the greatest value to the well being and comfort of a woman. It is generally described as one and one-half inch vertically, about the same transversely, and three-fourths inch antero-posteriorly. There is quite a variability of the dimensions, the antero-posterior diameter being greater in some and less in others. It is made up of muscular insertions and origins, of fibrous and elastic tissue, is bounded laterally by fat, is closely connected with the levator ani, gives a fixed point to the sphincter ani, transversus perineal and bulbo-cavernosi muscles, prevents the pushing of the rectum forwards and undoubtedly strengthens the part of the pelvic floor which has no posterior bony support.

There are a number of lacerations of this region which should not be confounded, to-wit: laceration of the hymen, laceration of the fourchette and laceration of the perineum, which may be partial or complete (Fig. 1).

Fig: 1



I believe that, no matter how slight, a torn perineum should be repaired, and the most satisfactory operation in my hands is that of Tait or A. R. Simpson, some what modified.

Nearly all operations for the repair of the perineum

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have points of the procedure in common. This operation, known as the flap splitting method, whether originated by Tait or not, has certainly been developed and popularized by him. Though operators in the East affirm that this operation is particularly affected by the Westerners, and claim that it is not as satisfactory as others; and although Robitansky asserts that it is merely one of "propping up" and composed principally of skin, I do not consider that it has its superior, nor its equal excepting in exceptional cases. As to the repair being composed of skin, the same may be said, more or less,

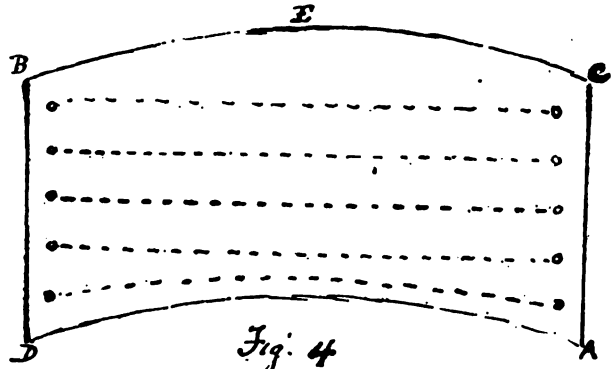


Fig. 4

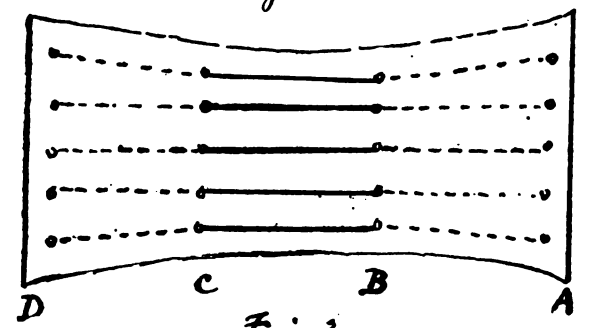


Fig. 3

Diagram of wound made by Tait's
points of entrance & course of sutures

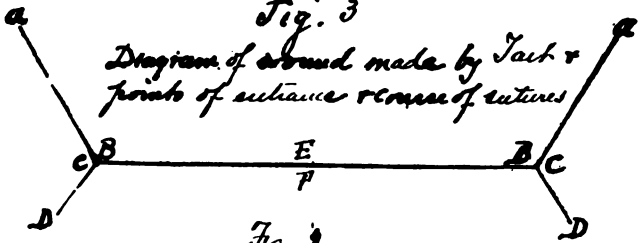


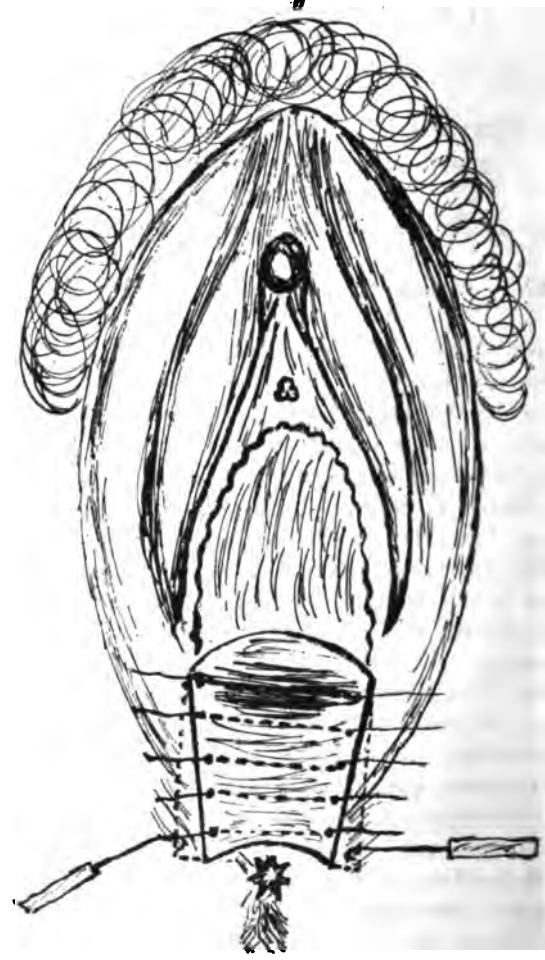
Fig. 2.

Incisions in Tait's operation

of any operation for repair of the perineum. It is justly claimed that it is very easily accomplished, the hemorrhage is slight, the results most satisfactory, the perineum a long one, the septum abundant and primary union follows. Judging from my own observations and reports of others, it seems that the restored perineum is not so likely to give way during subsequent labors. Tait states that he does not know of one having been torn a second time. The cicatrix is linear, resembling the natural raphe, and the tendency of the scar is to draw at right angles to the perineum, whereas the scar of other operations is transverse.

Tait classified his operation into two kinds, one for the extension of the perineum behind upwards, and the other for torn perineum, both being the same in principle but different in detail. The same might be said of A. R. Simpson's method, but the details are quite different. The success depends to a large extent upon the details, especially the passage of the sutures. They are not buried altogether in Simpson's operation, but are, in addition, re-inforced by deep silver wire, button-plated sutures. I believe that the changes I have made in the operation are an improvement upon both, particularly those relating to the operation for a complete laceration.

Fig. 5



Where the perineum is torn and there is scar tissue present Tait puts the cicatrix on a stretch and enters the scissors at the extreme end on one side and carries them across to the extreme end of the other side, the incision extending about three eighths of an inch deep, forming two flaps, a rectal and a vaginal. From each end, the incision is carried forward into the tissues of each labium for about an inch, or as far as is judged necessary, and again backwards for about a third of an inch, making a wound like that shown in the diagram No. 2, E corresponds to the vaginal flap, F to rectal. When the vaginal is pulled up and the rectal downward and the angle B outward by a tenaculum, the wound

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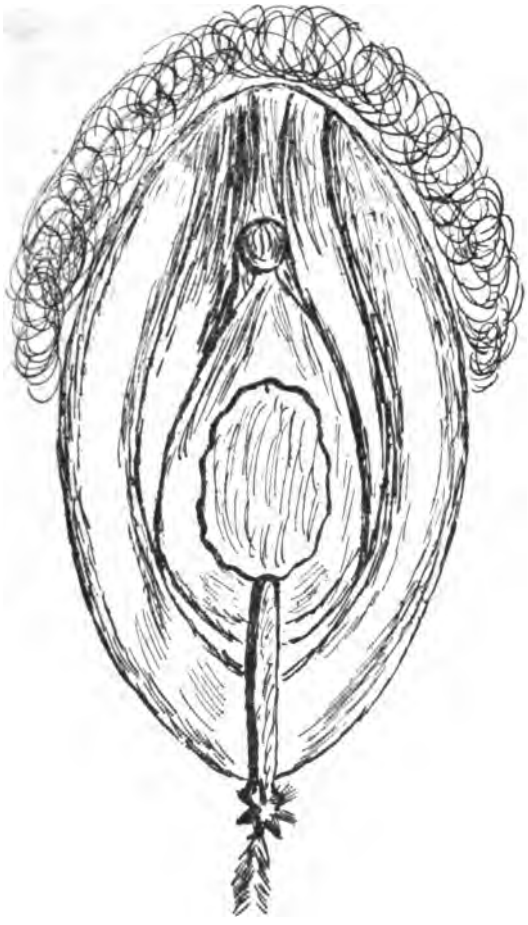
presents very much the appearance as shown in Fig. 3; in my hands that of Fig 4.

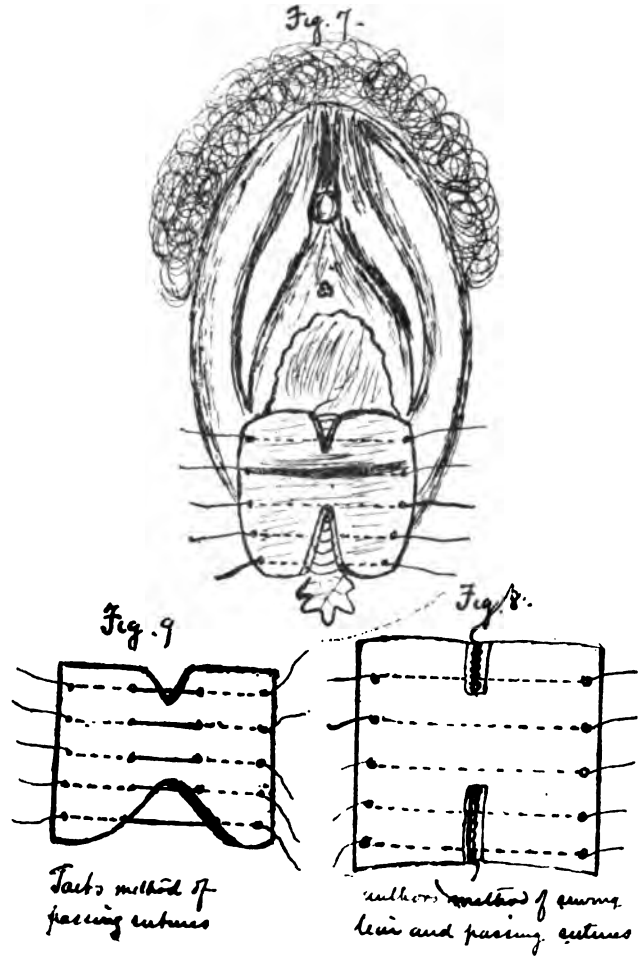
Fig. 6



Silkworm gut sutures are entered on one side, just inside the skin about one-eighth inch from the margin (not excluding the skin) as indicated in Fig. 3, A, and buried deeply in the tissue as far as the points B, Fig. 3, when the needle is made to emerge, thus missing the angle of the wound, and then made to re-enter the point C., Fig 3, passing deeply in the tissue and caused to emerge at point D. Tait believes that by not including in the sutures the tissues in the deep angles of the wound he insures more perfect and accurate adaptation of the masses of old perineum between A and B, and C and D, Figs. 3 and 9. But I do not think this is necessary; on the contrary, I believe it better to bury the sutures deeply in the tissues, as shown in Fig. 4; for, when tied, there will be no chance for a cavity for any accumulation, and the tension around the wound will be more uniform.

The operation for the restoration of the perineum, when the tear has extended through into the gut, Fig. 6, though similar, is not so easy. The scar tissue on each side of the torn septum having been removed, rectal and vaginal flaps are then formed, the incision being carried about three-eighths of an inch (if the tear does not extend this distance up the flaps will be divided as high up as the tear), beyond which the flaps will be continuous from side to side, as shown in Fig. 7.

The method of concealing the sutures, in connection with operations on the perineum, which is practiced by Tait and others, is not to be recommended. I have had occasion to remove them as late as one year or longer after the operation, in several cases which have come under my observation.



I would call particular attention to the following important points in connection with the operation of perineorrhaphy:

1. The incision should be deep, at least one half inch, and carried well forward in each labium for one inch. (Fig. 5).

2. The sutures should be silkworm gut, and passed within the margin of the wound, so that there will be no possibility of inclusion of the skin which will interfere with union. (Figs. 3, 4, 5, 7 and 8).

3. The silkworm gut sutures should not be concealed and left in, as they are liable to form points of irritation which become tender and painful, sometimes forming abscesses subsequently, and eventually have to be removed.

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4. By uniting the central free margin of the vaginal flap (Fig. 4, E) to the upper end of the wound, a lip, as it were, is formed which prevents the entrance of vaginal discharge into the wound.

5. When the tear extends through into the rectum, it is better to sew the sections of the rectal and vaginal flaps together with catgut before entering the silkworm gut, as it is an additional safeguard against the entrance of sepsis into the wound, and will prevent irritable elevations in the line of the scar on rectal surface, which sometimes occur. This is a very important point. (Fig. 7 and 8.)

6. If the tear is through the sphincter, it is all im portant that especial care be taken to engage in the su ture the divided ends of this muscle.

7. The silkworm gut sutures should be left long, so that no difficulty be experienced in their removal; at the same time less irritation to neighboring parts will be experienced. The skin between the sutures may be brought together by catgut sutures. The sutures should be left in from three to four weeks.

8. The vagina should be washed out at least once a day; the rectum may be occasionally, if the operation has been for complete laceration.

The Meaning and Import of Casts in the Urine Without Albumin.

BY DR. LUDWIG BREMER, ST. LOUIS, MO.

The microscopic examination of the urine, though resorted to more frequently now by the general practi tioner than ten or twenty years ago, is still too little practiced and is underestimated as to its value by the vast majority of physicians. In suspected cases of renal diseases or renal complications, the chemic test, fre quently a very crude one, is relied upon exclusively, and in case of absence of albumin the verdict is almost uniformly rendered: There is nothing the matter with the kidneys. How erroneous such a course is on the part of the physician, what dangers it involves to the pa tient, what damage it may cause to the reputation of the attending physician, and how important it is to the medical man to emancipate himself from a time hallowed and pernicious delusion, viz., the all-importance of the chemic urinary tests, I shall try to demonstrate and emphasize in the following remarks.

The diagnosis: Albuminuria, is, unscientific. This is an accepted fact. Albuminuria is not a disease, but a symptom of a number of diseases. Again, not only a variety of diseases, but a variety of altered conditions still within physiologic limits, may give rise to the presence of albumin in the urine. Thus a full meal or great bodily fatigue may cause its appearance in the urine of some persons said or thought to be healthy. A certain percentage of cases of albuminuria during preg nancy also belong in this category.

Now, in my experience and opinion, the presence or absence of albumin in the urine is not nearly of the diagnostic and prognostic importance, as the morphologic evidence of kidney disease, *i. e*, the presence or absence of casts. I venture the broad statement that a person, who constantly or periodically passes urine containing casts, even without albumin, or perhaps albumin in chemically demonstrable quantity, is not in good health. Such a person, in my opinion, has a damaged constitution; his kidneys are, to say the least, vulnerable. This irritative process which gives rise to the formation of casts, may not amount to an actual state of inflammation; above all, there may not be the recognized somatic signs of fully developed kidney disease, and yet the subjective symptoms may be very pronounced. They often are unaccountable to the attending physician, because not sufficient importance is attached to the presence of casts in the urine of such persons. Many obscure and inexplainable nervous disorders of an apparently functional character are, however, rendered intelligible, when viewed in the light of uremia or better urotoxemic conditions. A vulnerable kidney is naturally more easily disturbed in its functions, more prone to perverted action than the normal one. If it be true (and the trend of modern views and observations points in this direction) that there is an internal secretion in the kidneys, it can be easily conceived, how, besides the deficient activity of the kidneys, causing a lack of elimination of the body's waste-products, there may be vitiated metabolic processes in the kidneys, processes whose products are of a toxic character and which, when absorbed give rise to a multitude of nervous and mental symptoms. From a single indisposition and malaise, from a slight soreness of the skin to the most torturing of neuralgias, from an insignificant and often unheeded feeling of depression, excitement or mental confusion to the most aggravated cases of melancholia, mania or delirious insanity, all these shades and different intensities of nervous and mental disorders may arise from such vulnerable or damaged kidneys, the demonstrable evidence of disease in these organs being casts alone, the albumin being completely absent.

Again, there is a number of cases, and I have quite frequently met them in my practice during the last five or six years, in which periodic intermittent albuminuria is the feature and where the albumin is in evidence only when a nerve storm of unusual severity has set in. I have often diagnosed in such persons the vulnerable kidney which from want of a better name I have described as: Latent and Intermittent Nephritis Without Albuminuria (*Medical News*, October 20, 1894). For a long time, often for weeks or months, such patients may not have any albuminuria, the casts only being demonstrable, or even these may disappear and the urine be absolutely normal, and yet, there is a dormant pathologic condition which under certain favoring conditions is aggravated into activity. Such persons may live in comparative comfort for a long time, until a nerve and kidney storm brought on by a variety of causes, a cold,

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excessive physical or mental strain, grief and worry, an attack of an infectious disease, a fall, etc., renders the latent affection an active one.

In my practice it is an almost daily experience for me to hear, that my diagnosis of vulnerable kidney, which I held responsible for certain nervous or mental affections, had not been corroborated or verified by other physicians, who had repeatedly examined and "analyzed" the urine, and found everything in a normal condition. Aside from such examinations, which are based on chemic analysis exclusively and which, I once more desire to state, are unreliable, misleading and fallacious, there are such as, made with the microscope, fail to reveal any morphologic evidence of kidney disease in the shape of casts. There are several reasons why the examination for casts under such conditions may prove negative or be looked upon as negative:

1. Microscopic incompetency, which is very general.

2. The kidney trouble may have become latent, the casts are really absent, and, there being neither albuminuria nor casts, the unwarrantable statement is made: There is no Bright's disease, the kidneys are healthy, whilst the correct statement would have been, that at the present time there is no evidence of a kidney disease.

3. In spite of competency the casts are not detected because of insufficient instrumental equipment. No examination of this sort ought to be considered as final without the use of the centrifuge, an instrument which ought to be in the hands of every one that claims to be able to make reliable microscopic urinary investigations.

4. The examiner, even if he finds casts, may not attach any importance to them if unaccompanied by albuminuria. This, in my opinion, is an error of vital importance, and one that is widely spread. Experiments erroneously interpreted and therefore misleading warp the opinion of those, who rely on and use the microscope for clinical purposes.

Among other reasons, why the presence of casts in the urine is alleged to be compatible with perfect health, is the finding in the urine of athletes after great muscular exertion. Casts have been demonstrated in the urine of such persons under the condition stated. Now, nothing is more fallacious, than to say that, because a man is an athlete, therefore he is a type of health. The well known, and often commented upon liability of such persons to disease, especially of the heart and the blood-vessels in general, ought to counsel caution; again, the fact, that they generally die young, ought to serve as a pointer to the real state of affairs. So far as my own experience in the matter goes, I have time and again had an opportunity of demonstrating in young men, who used to be college athletes, the existence of hypertrophied hearts and the presence of casts (without albumin) in the urine. The clinical symptoms of their disease presented the mottled picture of neurasthenia. These were certainly damaged men and their kidneys were not only vulnerable, but actually diseased.

Besides neurasthenia, other neuroses, notably hysteria in its manifold manifestations, grows and thrives on a soil prepared by diseased kidneys in the pre-brightic or pre-cirrhotic stage. By this, of course, I do not mean, that hysteria is a result of this form of kidney disease, but the latter acts as provoking agent and converts into a fully developed disease what otherwise would have remained simply a predisposition.

Among the other symptoms which the chronic intermittent parenchymatous nephritis may give rise to is that known as "dead fingers." I must confess that I have seen but few patients, who complained of this symptom. Quite frequent, however, are disturbances of speech and memory. Aphasic phenomena are particularly apt to manifest themselves, often only in a rudimentary, fragmentary way. Inexplainable diarrheas, vomiting, harassing coughs, huskiness of voice, itching of the skin, nettlerash, muscular twitchings, hot waves and rushes of blood to the head with a host of other symptoms may be present. Above all, headaches of varying kinds and the symptom complex of megrim may be present as the clinical manifestation of this form of kidney disease; melancholia, hypochondriasis are also quite common.

Many cases of supposed malaria and grippe are nothing else than cases of nephritis developing from the mild chronic form above alluded to. On the other hand I believe that both these diseases are powerful factors in producing the ailment under discussion, giving rise to an acute infection-nephritis at first, which passes into a slow insidious form without albuminuria. Particularly grippe is apt to leave a chronic parenchymatous nephritis of this character behind.

The appearance and disappearance of casts depends no doubt on remissions and exacerbations of the existing trouble. This is particularly the case in megrim, which in many is nothing else than uremia; in the intervals they diminish or disappear altogether. The same is true of some other forms of periodic headaches.

I have found casts in almost all cases of tabes and paretic dementia that I have had an opportunity of examining. These patients rarely die from kidney disease, it is true; although they have casts in the urine for years; they may not present any uremic symptoms, but it is reasonable to infer, that the diseased kidneys help to develop the disease of the central nervous system and invite the diseases to which such patients finally succumb, such as pneumonia, erysipelas, etc. In some cases of tabic crises (gastric and laryngeal), also in the apoplectic and epileptic attacks of paretic dementia, casts were generally increased. As a solitary physical symptom of an existing chronic parenchymatous nephritis (of the undeveloped non-progressive or intermittent type) I have often seen, especially in men, a slight thickening of the temporal artery, with the characteristic tortuosities so common in the cirrhotic form of Bright's disease. Often it is only indicated by a temporal pulse stronger than normal. The main symp-

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toms, however, are generally the subjective ones, briefly outlined above.

In conclusion I would say that a person who has constantly or, from time to time, casts in the urine, even if they be only of the hyaline variety, must be considered damaged and prone to contract and succumb to, other diseases. Again, albuminuria without casts is of exceedingly rare occurrence, whilst the opposite, casts without albuminuria, is very frequently met with.

A rational course of dietetics, above all the avoidance of care meats and the derivatives of meat, such as meat soups and rich gravies, often bring about great improvement and in some cases total disappearance of the casts, together with that of the subjective symptoms. As to remedies, I have great faith in mercury, especially blue mass, administered in five-grain doses twice a week, and small doses (five grains) of sodium iodide.

The Significance of Suppurative Parotitis in Typhoid Fever.

BY G. W. H. KEMPER, M.D., MUNCIE, INDIANA.

Read before the Indiana State Medical Society at Indianapolis, Ind., June 7, 1895.

Recently I met with a case of that somewhat rare complication known by the several names of suppurative parotitis, metastatic parotitis, and parotid bubo. The patient was a man aged 36 years. On September 22, 1894, he called at my office for treatment, stating that he had been having some fever for about one week, yet he had been going about, and had even performed some manual labor.

His tongue was red, clean, and rather dry. The temperature was nearly 102°. His face was dull and expressionless. He had a fair appetite, but a degree of indigestion and a tendency to diarrhea. My diagnosis was typhoid fever of a mild type. He agreed to desist from work, but insisted that as he did not feel weak, he might not be required to undress and take his bed. In fact, during the next two weeks he came a few times to my office to report his condition. At no time did the fever rise above 102°. The abdomen presented but slight tympanites, and no eruption appeared. Toward the last, his wife reported his condition until October 6, when I first saw him at his home. At that time he had but little fever, but complained of a sense of depression. Three days later, October 9, I found him with a well-marked parotitis on the right side. The swelling had manifested itself first on the 7th, and the tumor had steadily progressed in size. The skin over the gland was reddened, and very tender to the touch, and he complained of constant pain. It steadily progressed to suppuration, and on October 16, I lanced the swelling and gave exit to a large quantity of pus. Poultices were applied, and it continued to discharge for nearly two weeks. With the evacuation of the pus the temperature fell to normal and he made a rapid recovery.

This is the first well marked case of suppurative parotitis that has fallen under my immediate observation in a practice of nearly one-third of a century. Referring to authors, I found that its importance as a factor in prognosis was viewed quite differently by distinguished medical men, so much so, that I have deemed it worth while to present a number of extracts from representative men in our profession. To me the gleaning of these opinions was a pleasure and profit, and I sincerely hope that my hearers will feel equally as well repaid.

Trousseau remarks of this complication: "This is what the old physicians would have called a crisis or metastasis; but I call it a very evil-boding complication. The significance of parotitis is very differently regarded; some look on it as always a serious complication, while others consider its appearance as an announcement of the favorable termination of the disease. For my part, gentlemen, I regard parotitis as a very formidable complication; it is an affection from which I have almost never seen typhoid or other fever patients recover."—*Clinical Medicine* (New Syd. Soc. Ed.), Vol. II, p. 363.

Flint says: "A rare but somewhat characteristic complication is inflammation of one or both of the parotid glands. It leads to a notable enlargement and the appearance is like that of ordinary parotiditis or mumps. But, unlike the affection just named, in the great majority of cases suppuration takes place, and not infrequently more or less sloughing of the areolar tissue. This complication adds to the danger and retards convalescence. It may occur at any period of the febrile career or during convalescence. It is not to be regarded as a critical event. The discharge of pus is sometimes into the meatus auditorius. This complication occurs in typhus as well as typhoid fevers. It occurred in five of thirty cases of typhus and typhoid fever which I recorded in the winter of 1849-50. Prior to that year I had never met with an example, and since that year, I have met with a very few examples only, in a much larger field of observation."—*Practice of Medicine*, Second Edition, page 785.

Dr. Muirhead, of Edinburg, in discussing the prognosis of "Metastatic Parotitis," says: "This depends greatly on the severity of, and the stage of, the primary disease during which this complication declares itself. If it makes its appearance at the height of the fever, and particularly if that be a grave form of fever, then the prognosis must be very guarded. Trousseau remarks that it is an affection from which he has almost never seen enteric or other fever patients recover. This is certainly not in accord with the experience of this country. If it occur during convalescence from a fever or other disease, the prognosis is then much more favorable."—*Quain's Dictionary of Medicine*, page 1384.

Liebermeister writes: "Parotitis begins most frequently during the third or fourth week, sometimes without producing any very marked symptoms, at first, in a patient who is lying very low. It is almost always

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confined to the most severe cases, and is a bad prognostic sign; first, because it gives evidence of the probably advanced degeneration of other organs; and secondly, because in itself it begets new fever and aids in exhausting the vital powers; furthermore, it may threaten life by the spread of its destructive processes to neighboring parts, or by its other unfavorable consequences." He further states: "Since the introduction of a systematic antipyretic treatment, the frequency of suppurative parotitis has greatly diminished. Whereas, previously one case occurred to every hundred typhoid fever patients, since the year 1872 (inclusive) but two cases have occurred among 1100 such patients. Both these cases terminated fatally."—*Ziemssen's Cyclopedia*, Vol. I, page 161.

Hutchinson, one of our latest writers, says: "Swelling of the parotid gland occasionally occurs in typhoid fever, but is much less common than in typhus fever. It is most frequently met with in bad cases about the end of the third week or later, and generally involves one side only. The swelling is hard and firm in the beginning, and may terminate in resolution or suppuration. I have seen it three times only, twice in my own practice, and once in that of a medical friend. One of my cases was fatal, the other ended in recovery, as did, I believe, the third case."—*System of Medicine*, Pepper, Vol. I, page 296.

Murchison met with this complication in only six cases, five of which proved fatal. According to Hoffman, sixteen cases of suppurative parotitis were found at Basle among 1600 typhoid fever patients, seven of sixteen proving fatal. Parotitis without suppuration occurred three times. In fifteen cases the attack was confined to one side, nine times to the right, and six to the left; in four it was double.—Liebermeister.

The following somewhat lengthy extract from that great master—Graves—will, I am sure, repay the reader for the time spent over it. He gives us some views upon the pathology of the affection.—*Clinical Medicine*, New Syd. Ed , Vol. I, page 222.

"There is another subject which I wish to bring before you to-day, namely, the seat of the swellings which, in the latter stages of fever, are usually attributed to inflammation of the parotid and sub-maxillary glands. Every writer on the subject of fever has noticed the occurrence in the last stage of that disease, of tumors, which not unfrequently suppurate, and which all consider as the consequence of inflammation in the glandular system; the parotid and sub maxillary glands being the parts most frequently engaged. Four such cases have lately presented themselves to our observation, two with a favorable, two with a fatal result. The latter afforded us an opportunity of examining the nature and seat of this affection, with a view of determining the correctness of the opinion generally entertained concerning these points.

"In our first case, the sudden appearance of the tumor was very remarkable, for, in the course of a few hours, two swellings had been formed, in their situation and general appearance resembling mumps of the largest size. They were so extremely tender that the patient screamed on their being touched even in the gentlest manner, yet they were unattended with any cutaneous redness. Without producing any alleviation of the cerebral affection that constituted the predominant symptom of this poor man's fever, these swellings somewhat subsided before his death, which happened on the following day. Much curiosity was excited among the pupils, with regard to the nature of this local affection, and by many it was considered as arising from a sudden inflammation and tumefaction of both parotids, so exactly did the tumors, in extent and situation, resemble the mumps. Their hardness, it is true, was not so great as that usually observed in the latter disease, but this circumstance alone could not be relied on as a distinction. On examination, the parotids were found raised up by the tumors, but were not enlarged or otherwise altered in structure, except that their interstitial areolar tissue was, as it were, bathed in a reddish serous fluid, evidently the result of a violent inflammation of a peculiar character and short duration. The swellings were owing to the effusion of a similar fluid, which abounded most in the subcuteneous areolar membrane, while, in that which pervades the substance of the muscles, not only in the superficial, but in that more deeply seated, it was observed in lesser quantity. The intermuscular spaces were also occupied by this fluid in considerable quantity

"The facts just stated are, I think, gentlemen, conclusive in proving that the tumors hitherto supposed to arise from inflammation of the parotid or submaxillary glands, and which in fever sometimes forbode death, and are sometimes the precursors of returning health, are not owing to an affection confined in its action to these glands; but on the contrary, the inflammation and its consequent tumefaction are seated in the areolar membrane of all the neighboring parts; so that the bulk of the tumor is sometimes altogether, and generally for the greatest part, made up independently of disease of these glands"

If I have dwelt somewhat at length upon the views and conclusions of authors who have written upon the subject, I feel that the subject is most worthy of our consideration. In conclusion, I offer the following summary:

1. The affection we are considering differs from ordinary mumps in that suppuration takes place in a great majority of cases, while in mumps such a termination is rare.

2. It occurs in mild as well as in severe cases of fever.

3. It can hardly be regarded as a critical event.

4. It appears to be prevalent during certain periods, even assuming an epidemic form.

5. Its gravity is to be estimated by the time when it appears in the course of the fever. It is a worse omen when occurring in the middle of the fever; less so during convalescence.

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

Communications and medical books for review should be addressed to the editor, 2940 Locust st.

All letters containing business communications or referring to the publication, subscription, or advertising department of the REVIEW, should be addressed to 2940 Locust Street, St. Louis.

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Multiplication of the City Dispensaries.

Every large city with the unavoidable medical colleges has its dispensary question. To the practising physician the college dispensaries have been as many thorns in their flesh. If all the articles written during the last three or four years on the abuse of these institutions were collected, they would fill several large sized volumes. St. Louis is certainly not behind the other large cities of this country in number of dispensaries, where the poor, and still oftener people, who could well afford to pay a doctor a moderate fee, are treated gratis and skillfully.

There is even a brisk competition between the different dispensaries, and a patient who can not, or does not choose to pay, has the *embarras de richesse*, so far as the treatment by medical celebrities and polite attention is concerned. In addition to the college dispensaries for which there is, after all, a reason for existence, the only objection being, that there are too many of them; there flourish a number of exceedingly unnecessary institutions of this kind. Let us hope, that they are all run on truly charitable principles and that there are no motives either of lucre or advertisement behind them.

The worst specimen among these pseudo-humanitarian schemes was established several years ago on Olive Street, near Jefferson Avenue. It was short lived, and after some benevolent but benighted citizens had uselessly sunk their honest dollars in an undertaking which had been gotten up for the self aggrandizement of a morbidly ambitious medical gentleman, it went in the course of time into well merited innocuous desuetude. The grimy windows, so characteristic of an untenanted building, have exhibited for years, and still do so, the legend in artistic silvered letters "Free Clinic." It is said, that in the one year's (or more) existence of this temple of charity, there were at least a dozen persons treated. If they were worthy and if they were benefited by the ambitious chief, and his ever tired looking assistants, who used to sit at the windows, looking for surgical and medical material, the recording angel of charity will have done his duty, we hope. Suffice it to say, that the "Free Clinic" is dead beyond resuscitation and that the only concern of the general practitioner now is: which one is next?

There is but one voice as to the harmful character of the too multitudinous dispensaries, as affecting the business of the hard pushed general practitioner; and now we hear, that four new branch city-dispensaries are to be established in various parts of the city, in order to facilitate the service of gratuitous medical aid. Dr. Starkloff, the newly appointed health commissioner is an energetic and capable gentleman, whose ambition evidently is to make an honorable record in his official capacity. We have no doubt, that he is actuated by the best of motives, but we doubt the wisdom of the new departure. The establishment of branch-dispensaries would be only a further step toward pauperizing the medical profession, especially the younger portion of it. Not only will it hamper the young physician starting out in practice in a large city like St. Louis, in his efforts to build up a practice, but the established practitioner, who is willing to do his part of charity practice will be hurt in his business by the abuse which inevitably attaches to all dispensaries. We do not believe, that the move of the health commissioner is a wise and good one and fail to see its necessity.

A Compliment to the New Superintendent of the City Hospital.

There is at least one daily paper which is thoroughly disgruntled at the present management of the City Hospital and speaks in no uncertain tone about the inaccessibility of the unfortunate sick who under the defunct administration, had so often to furnish material for the reporters and food for the morbid curiosity of a part of the newspaper columns. By the way, even the press seems to have become surfeited with such reports and the truth begins to dawn upon at least one of the editors, that the motives of giving out reports of extraordinary surgical feats are not always or entirely

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above-board, and that the business looks suspicious. In a dispatch coming from an Eastern city, the statement had been made, that a surgeon had performed the dar ing operation of removing a man's diaphragm. We can imagine what envy this dispatch has caused to the newspaper surgeons of our city. A man without a diaphragm! what a vision of sublime surgery! But the editor of the *Post Dispatch* does not believe in it and he states his reasons in a lengthy editorial.

A Refutation of Judaism.

Our friend Isaac Love is quite indignant, that some conferes have asked him over the telephone, whether he was a Jew or not. With great zeal and overflowing with bitterness, he tries to prove to the readers of his journal, in an article of several columns, that he is a Gentile. What a waste of ingenuity and energy! He ought to have accepted it as a compliment to be classed in a race which not only has given to humanity the brightest lights in religion, philosophy and poetry, but has also furnished physicians that have left their footprints in the records of the science of medicine. It certainly is, if anything, an honor to be classed with a people which has produced such medical luminaries as Cohnhein, Stricker, Traube, Senator, etc. Dr. Love believes himself persecuted and misrepresented by his best friends. What is the matter?

MEDICAL SOCIETIES

Proceedings of the St. Louis Medical Society.

W. H. FUCHS, M.D., EDITOR.

Stated Meeting, Saturday Evening, May 11, 1895; the President, F. D. MOONEY, M.D., in the Chair.

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DR. F. J. LUTZ presented a specimen of "Tuberculous Lungs," which had been removed post-mortem from a patient who had been treated with Dr. Paquin's anti-tubercle serum.

The patient had been sick with phthisis pulmonalis for seven years, and had had, during that time, several severe pulmonary hemorrhages. When the treatment was begun patient weighed 95 pounds and he had a lung capacity, as indicated by the spirometer, of 90. He expectorated profusely, expectoration being of a muco-purulent character, and the bacilli were found in large numbers.

The treatment had been employed six weeks under the direction of Dr. Hennerich, of the Alexian Brother's Hospital. Patient did not gain any weight during that time, but the lung capacity increased to 115, as indicated by the spirometer. The treatment was discontinued six weeks before patient's death, the immediate cause of which was a hemorrhage from a cavity in the apex of the right lung. The opening of a rather large artery with a thrombus formed over the mouth is plainly visible in the specimen.

The point of particular interest is the condition of the cavity in the left lung which was the only one which was diagnosticated by auscultation and percussion. The cavity is perfectly clean, it contained no secretion at the time of the post-mortem, and the surface is smooth and lined by a distinct membrane which shows no points of ulceration whatever. This latter feature is in marked contradistinction to the cavity in the right lung, which evidently must have formed very rapidly and on the surface of which a number of points of distinct ulceration may be seen.

This condition may prove nothing at all, for we know that in many cases of tuberculosis the inflammatory process set up by the bacilli becomes limited; that under other forms of treatment a cavity may, and often does, become obliterated, cicatrized. Although the cavity in the right lung may have existed at the time the treatment was employed, that point is by no means settled. There is certainly a strange concurrence of conditions here. There is considerable secretion from the cavity in the right lung which did not exist while the treatment was being carried out, while the cavity in the left lung, which did exist while the treatment was being carried out, is perfectly clean and contains no secretion. It may be that the tuberculous process was stopped in the left lung under the influence of the serum injections.

Speaker, with many others, believes that it is right and proper that the investigations and observations which Dr. Paquin is making in this direction should be encouraged, and he had, therefore, placed at his disposal as many cases as possible, who were willing to submit to this treatment.

DR. PAUL PAQUIN was very much pleased with the demonstration of the specimen, as it shows more distinctly a condition which he had found in the living subject after a few weeks of serum treatment. This same condition of drying up of existing cavities has prevailed in five cases, after a period of interrupted treatment extending over two, three and four months. The longest period of treatment was two months. In one case, in which there existed a cavity of considerable size, there was a considerable amount of muco-purulent expectoration, amounting to one pint daily, which disappeared entirely after the treatment had been continued for some time. Of four other cases under treatment at the present time, and who have been under treatment for four, six and eight weeks respectively, two have two cavities, one in either lung, and the other two have but one cavity. In all four the expectoration has been reduced to such an extent that there is barely sufficient to make a microscopical analysis. In another

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case, in which the blowing sound and expectoration had ceased entirely under treatment, these symptoms re appeared when the injections were discontinued.

Dr. William N. Beggs was inclined to believe that the specimen proves nothing whatever, as regards the efficacy of the serum treatment. The records of the case, as presented, are insufficient to enable us to pass any judgement on the effects of the treatment. The appearance of the cavity is not such as would lead one to think that the six weeks course of treatment caused the change, but the process has been going on longer than six weeks and antedates the change in the treatment. Then, the appearance of the other lung does not argue much for the cessation of the process, as a process. We know that it is true, that a cavity will dry up, and although this is not exceedingly common, it does occur sufficiently often as not to depend necessarily upon any given form of treatment. Some cases occurred in the City Hospital, even under the unfavorable conditions under which these cases are placed, where cavity after cavity, in different individuals, dried up, and the patient remained without any indication of progress of the disease for months and years. One case in particular, in whom a cavity was distinctly demonstrated and which dried up, remained in the hospital for years and continued in fairly good condition.

In the specimen presented the cavity is a characteristic example of a long standing, clean cavity and not of a recent one. In another portion of the apex of the same lung we find much recent and active tuberculosis going on. In the right lung, where there is a large cavity, the process was undoubtedly very active. Although the specimen proves nothing as to the efficacy of the new treatment, it also proves nothing against it.

It has been very properly said that we have to deal with a mixed infection in these cases. The investigations which have been made to determine the character of these infections are too few to enable us to say anything about them, although, in all probability, the course of the disease is affected by them. The presence of bacteria in a cavity means nothing, as there are many kinds which have no detrimental influence upon the patient.

One of the reasons why these cavities do not heal rapidly is the fact that they are lined by a clean wall of firm, fibrous tissue, which is almost proof positive that the cavity is of long standing and that the process has been very slow. It could not heal rapidly unless it were cleaned of its septic material.

There is one fallacy which must be guarded against in estimating the benefits of treatment by indications of the spirometer. It is a well known fact that by practice a patient is able to reach a higher notch upon the spirometer, and the only way to obtain an intelligible judgement as to the effect of treatment, is to test the patient after the treatment has been continued for some time.

Dr. A. B. Shaw was inclined to share the views of Dr. Beggs, with reference to the potency of the serum treatment as indicated by the course which the ulcerative process had taken in the case presented. The fact that we have a cavity in the right lung which displays no tendency to heal but is in an active state of ulceration, would indicate that the drying up of the cavity in the left lung was not due to the influence of the treatment; for, if the serum therapy was so potent as to cause the rapid healing of the cavity on the left side, it would necessarily have been sufficiently potent to have prevented the active ulceration on the right side.

In ascribing a cause for the presence or absence of gurgling sounds, we must remember that the gurgling depends not only on the amount of liquid in the cavity, but on the location of the vent. If the vent be so located that the air passes through the liquid on inspiration and expiration the gurgling sounds will occur, but they will be absent if the air passes over the surface of the secretions. These conditions will vary with the position of the patient, which might also favor proper drainage of the cavity and in that way prevent accumulation of secretions.

Dr. Jacobson had seen a case which Dr. Cale was treating according to Dr. Paquin's method, in which there was considerable rise in the temperature, attributed by Dr. Cale to the injections of serum. He asked Dr. Paquin how he would account for this rise.

Dr. Paquin said he knew nothing definite about the temperature in the particular case referred to, but thought that it had subsided since that time. He had seen the serum administered in many cases where the temperature did not rise. We must remember that there is a rise in temperature in the process of tuberculosis, and this may have been the cause in the case referred to.

In taking blood from an immunized animal after the fourth or fifth time, one fourth of the blood may be reduced to serum, and the withdrawal has been followed by fever. Speaker attributes this to the formation of toxines in the process of recuperation from the drain occasioned by the withdrawal of the blood. He does not know the exact nature of the process, however.

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Dr. W. H. Mayfield presented a patient who had been operated upon for "Tubercular Osteo-Myelitis" of both tibia and knee-joints.

The patient is 15 years old, and the family history indicates an hereditary tendency to scrofula and kindred troubles, several members having died of these troubles.

Patient has been unable to walk for a number of years. On July 13, 1890, patient was first seen by her family physician, and was suffering with all the symptoms of an acute osteo-myelitis. Operation was proposed on August 13, but was abandoned, the temperature ranging between 100° and 104° F., and pulse 100 to 131. On August 21, the first evidence of necrosis manifested itself, and a positive diagnosis was made for the first time. The necrotic process was indicated by a black line extending from the ankle to the knee-

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joint, and was followed, eight days later, by sloughing. This process continued until December, 1890, when a piece of bone was discharged. On October 21, 1890, an operation for the removal of the necrotic structures was performed. This was followed by a second operation of a like nature, a tenotomy for straightening the leg, and a forcible straightening of the ankles, which were then placed in plaster-of Paris and kept there five months.

In removing the necrotic bone the whole tibiæ were laid open and both knee-joints completely cleaned out, so that on the right side only a false joint remains. The necrotic process involved almost the lower third of the femur. Patient was confined to bed almost twelve months, but has regained her health completely and is now able to walk without a crutch. She returned recently to have a small piece of necrotic bone removed The wound thus occasioned is now almost completely healed.

The tuberculous nature of the trouble was demonstrated by the finding of the bacillus in the discharges of both legs.

Dr. Paul Paquin had recently seen two similar cases in his practice, which are being treated with the anti-tubercle serum. In one case a resection of the knee was performed at the Woman's Hospital. The process had gone on to such a degree that an operation on the hip should have been done according to the dictates of good surgery. All necrotic material was removed from the knee, however, the parts were dressed and left in that condition for ten days. No suppuration has occurred, the wound healed by first intention and the patient has improved rapidly. There is no evidence that the tuberculosis is progressing.

In the other cases there are thirteen fistulæ scattered about the surface of the diseased parts, and they had been operated upon four or five times. After three weeks, treatment with the serum the secretions have diminished very markedly, and the principal fistula seems to be entirely dry.

ABSTRACTS

MEDICINE.

A Bread Substitute for Diabetic Patients.—Dr. Williamson, of London, in a recent article in the *British Medical Journal*, has again called attention to the use of aleuronat in the preparation of bread or biscuit for people suffering with diabetes. Aleuronat is a flour containing about 80 per cent of vegetable albumen, and only 7 per cent of carbohydrates. It has been more or less used in Germany and has been strongly recommended by Professor Ebstein for diabetics. As Professor Williamson says, however, it is somewhat difficult to prepare diabetic food from aleuronat, it being usually necessary to add considerable starch-containing flour, which obviously diminishes greatly the value of the product as a diabetic food.

Dr. Williamson finds, however, that by a simple combination of aleuronat with desiccated cocoanut powder, cakes can very easily be prepared. Cocoanut contains a large percentage of fatty matter (70 per cent.); a small quantity of sugar is also present, but this can be almost entirely removed by fermentation.

For the preparation of these cakes, 2 ounces of desiccated cocoanut powder are mixed with a little water containing a small amount of German yeast. The mass is then formed into a kind of paste, and this is kept for half an hour or longer in a warm place. The small amount of sugar contained in the cocoanut is almost entirely decomposed by the fermentation produced by the yeast, and the cocoanut paste becomes spongy. Two ounces of aleuronat, one egg beaten up, and a small quantity of water, in which a little saccharin has been dissolved, are now added to the cocoanut and the whole well mixed until a dough is formed. This is divided into cakes, which are baked in a moderate oven for twenty or thirty minutes. Or, cocoanut can be employed from which the sugar has been previously removed. In this case, the process of fermentation can be omitted and the cakes prepared by simply mixing together two ounces of aleuronat, two ounces of the prepared cocoanut powder, one egg (beaten up), and a little water sweetened with saccharin. The mixture is then divided into cakes and baked. The cakes are most palatable when newly made. If they have been prepared more than twenty-four hours the taste is greatly improved by slightly warming them before the fire. They are also improved by being buttered.

According to Dr. Williamson, the advantages of these cakes are:

1. A diabetic patient can have them prepared at his own home.
2. If so prepared, they are cheap, compared with most diabetic foods.
3. They are much more palatable than most diabetic cakes; to many persons they are very palatable.
4. They contain a large quantity of vegetable albumen and fatty matter, and only a very small amount of carbohydrate matter.

A solution of iodine gives no blue coloration with the cakes, and hence the starchy matter must be very small or practically absent. Consequently, these cakes must prove useful as a bread substitute, especially for those diabetic patients whose diet ought to be rigid; that is, for cases of the milder forms of the disease. When given to diabetic patients in place of ordinary bread, of course a great diminution of the quantity of sugar excreted in the urine is observed.—*Dietetic and Hygienic Gazette.*

The Therapeutic Action of Ferruginous Compounds.—At the recent Congress of Medicine

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held in Munich there was an interesting discussion on the therapeutic action of iron compounds, concerning which we quote the following from the *Lancet:* Professor Bunge, of Basle, having referred to the importance of the part played by hemoglobin in the animal economy, said that it is very improbable that iron in the from of inorganic salts introduced into the human body by the food becomes converted into hemoglobin by synthesis. The case is otherwise with organic ferruginous combination such as are present in the yolk of egg in the form of nucleo-albumins, from which the hemotogen originates. Several combinations of iron exist in milk and also in vegetables, the latter containing a considerable amount, but milk only a small quantity. This seems to be incompatible with the fact that milk contains all the elements necessary for the growth of a young organism; but this deficiency is compensated in young animals by a very large reserve stock of iron derived from the placental circulation, and when this stock is exhausted they instinctively begin to take vegetable food. The same is the case in the human subject. The iron necessary for her offspring has been in process of accumulation by the mother not only during her pregnancy, but even since her arrival at puberty. Perhaps the appearance of chlorosis is caused by the fact that solid tissues of a woman abstract iron from the blood without giving anything in return. This compensation can only be effected by means of organic preparations of iron, which alone are absorbed; whether they are assimilated is very doubtful, and, therefore, the best way to provide the human body with the necessary amount of iron is by the dietetic use of ferruginous vegetable products. Ferruginous drugs only act by suggestion; the iron which is to be assimilated must be obtained from the market garden, and not from the pharmacy.

Professor Quincke stated that he had made investigations as to the quantity of free iron in the tissues, and had found that it increases or decreases according to the chemical qualities of the ferruginous preparations ingested. According to him, there are three varieties of iron-compounds present in the human body:

1. That in the tissues.
2. The reserve stock.
3. That in the circulation.

Ferruginous preparations he divides into six classes:

1. Ferrocyanic combinations, which have no influence on the organism.
2. Blood, which is usually held in reserve, but may be usefully given in anemia.
3. Diluted hemoglobin.
4. Citrate of iron, which does not coagulate albumen.
5. Insoluble combinations, which, if subcutaneously injected, are in course of time absorbed.
6. The other oxides and suboxides of iron.

These form albuminates in the stomach and intestines, and are but slightly absorbed in the normal body; perhaps more so in anemia, where they become directly assimilated. He is persuaded of the efficacy of ferruginous preparations, especially of the suboxides and albuminates; but is not of opinion that organic compounds are preferable to inorganic, the inorganic iron being changed in the intestine into an organic combination. Sufficient experiments have not yet been made on the therapeutical value of hemoglobin. He finallaly remarked that drugs can not be dispensed with in the treatment of chlorosis.

Dr. Heubner, of Berlin, said that infants ought not to be fed too long upon milk, while Dr. Siegfried thought that ferruginous medicines in conjunction with residence in mountainous localities would be successful. Dr. Zimmerman, of Basle, did not agree with Professor Bunge's opinion that the quantity of iron in the food was sufficient, and thought that suitable iron preparations were necessary. Dr. Edlefsen, of Hamburg, recommended the administration of hydrochloric acid with iron preparations, while Dr. Ewald, of Berlin, thought that this combination should be used only when the gastric hydrochloric acid was ascertained to be deficient.—*Dietetic and Hygienic Gazette.*

The Sporozoa of Variola and Vaccinia.—It has been found that if a scratch is made in the cornea of a rabbit or a guinea pig with the point of a sterilized knife, and then a little active vaccine lymph is laid on the scratch, cell infection occurs. The author made the experiment seven times, with a positive result in each case. What is understood by the term "cell infection" will be best conveyed by a detailed account of the histological changes which follow the inoculation

If the animal is killed forty-eight hours after vaccination, and the cornea is at once excised and placed for twenty-four hours in a saturated solution of corrosive sublimate, and then prepared in the usual way, vertical sections show cell inclusions lying close to the nuclei of the deeper epithelial cells at and in the vicinity of the seat of inoculation. These cell inclusions are minute, highly refracting bodies, which stain deeply with acid hematoxylin, but show a preference for such stains as carmine, eosine, and acid fuchin. Most of the cell inclusions are homogeneous, but some have in their dense substance a central denser spot. Many of the bodies give evidence of subdivision into two similar parts. Some of the cells contain two such bodies.

There is nothing in the above-mentioned bodies which would exclude the possibility of their being due to some form of degeneration. The facts, however, that ameboid movement has been observed in those bodies and that their presence is dependent upon previous vaccinations, point to their being intra-cellular parasites, and their peculiar density and high refractive index also agree with what the author has described as features of certain sporozoa. If they are parasitic, it is necessary to inquire to what group of organisms they may belong. The chief groups of unicellular parasites which pass part of their existence within the cells of their host, are the chytridiaceæ, the synchytriaceæ, some of the

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suctoria, and the sporozoa. The chytridiaceæ are regarded as fungi devoid of mycelium. They occur in some algæ and other plants. The synchytriaceæ, hitherto regarded as vegetable organisms, belonging to the chytridiæ, are now considered by Zopf as probably belonging to the protozoa. This view would approximate them to the two remaining groups. Some of them have flagellate swarm spores. The common acineta may be given as an example of the suctoria, some species of which enter the bodies of other protozoa, and there subdivide into ciliated spores. It may prove they are linked to the sporozoa by intermediate forms. As far as is known, they are confined to other protozoa as hosts. The sporozoa are probably the most nearly related to the ciliata, and are necessary parasites. They are met with in the metazoa from the tape-worm upward. The name of the group was derived from the hard-shelled bodies known as pseudo-navicellæ—the sporocysts of certain gregarines. In some of the sporozoa for instance the sarcosporidia and the so-called psorosperms of the human urinary tract, hard shelled spores (sporocysts) have been met with, and thus the name of the group is no longer completely applicable. Similarly, sickle shaped spores are not a necessary phase. They are absent in the myxosporidia, the microsporidia, etc.

The decision of the position in classification to be assigned to any newly described organism must ultimately rest with biologists. The few features already sketched would certainly not suffice to refer the bodies either to the protophyta or the protozoa. The vaccinated cornea at the end of the third day is admirably suited to afford additional evidence, which consists in the presence of a variety of organized structures constituting an extension of the series illustrated in the author's paper. Besides the small parasites, others appear, with a central reticulated zone. There it also evidence that these cell inclusions break up into highly refracting segments, The intra-cellular group of bodies the author regards as the result of subdivision, rather than of multiple infection, on account of their arrangement, straining reactions, etc. The gradation of forms already portrayed not only favors the supposition that the bodies are parasites, but that they belong to the sporozon—namely, a clear central part bounded besides the intra-cellular bodies, ripe or adult parasites, which have escaped from their host-cells and lie free on the surface, or on the interstices of the epithelium; for all the known sporozoa, without any exception, when infesting epithelium present such free bodies. Free parasites, as they may now justly be termed, abound in the vaccinated cornea on the third day. Some are in the form of large, round, oval, or pear-shaped cells of the same general characters as the bodies the author has described as free sporozoa, in cysts of the ureter and various cancers and sarcomata; they have a central granular portion surrounded by a dense ectosarc. Others of the free parasites present an appearance characteristic of sporozoa—namely, a clear central part bounded by a distinct zone of granules. Lastly, the author mentions large free parasites, which have evidently undergone subdivision into segments, some of which are granular; others possess nuclear matter, either in the form of fragments or radiating bars. After the most careful consideration, C. came to the conclsion that the larger segments of such bodies may be taken to represent sporogonia, and the smallest, spores.

Such an extended series of forms fully warrant the conclusion that the bodies are parasitic,and justifies our placing them, at least provisionally, among the sporozoa. The bodies described above as sporozoa present the most complete homology with bodies C. has described also as sporozoa in cancer and sarcoma. The invasion of leucocytes in the vaccinated cornea begins on the third day. There is nowhere the least ambiguity between leucocytes and parasites. Appearances which may be construed as phagocytosis are present, but not very abundant.

The author also examined the contents of variola vesicles and the skin of persons who had died from smallpox. In both situations he was able to find bodies identical in structure with those he describes in the vaccinated cornea. Until the nature of these structures is settled, and the minds of pathologists are familiar with their presence and meaning, it will be premature perhaps, to discuss the question of the relation of the parasites to variola and vaccinia. C., however, refers to the importance of the observations made by Van der Loeff and L. Pfeiffer as to the motile flagellate bodies in the blood of persons suffering from these diseases. The author closes his remarks by stating that, in his opinion, the processes which take place in the vaccinated cornea and in other lesions of vaccinia and variola are comparable in a remarkable degree to those which he has observed in cancer. The parasites in the latter condition present a more extended series of forms than those of varlola; yet, in both cases, the fundamental characters of the pharasites are the same—namely: "At certain stages they resemble recognized sporozoa, the intra cellular phases being of especial importance. They tend to assume a round or oval form. Their protoplasm is dense and highly refracting, and stains deeply with carmine, acid fuchin, etc. Their nucleus often does not give the reaction of chromatin to acid hematoxylin. All stages of swarm-sporing can be observed." Moreover, the same hypertrophy of cell protoplasm and cell nuclei is seen in the vaccinated cornea and in various cancers and sarcomata.—J. Jackson Clarke, F.R.C.S. in *Lancet.*

The Influence of the Nervous System on Secretion in the Stomach.—The relation between the nervous system and secretory activity has been investigated more thoroughly for the salivary glands than in the case of any other secretory organs connected with the alimentary tract. The researches have given unquestionable evidence of the existence of at least two classes of nerves acting on these glands; true secretory

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fibres acting upon the secreting mechanism itself, and other fibers which carry impulses to the blood vessels supplying the glands. The experimental data which exist with reference to the gastric glands in their relation to the central nervous system are by no means equally conclusive in their significance.

The bulk of evidence indicates that the stomach of carnivorous animals, at least, is empty during the periods in which no digestion takes place in that organ. The pale, unruffled appearance of the mucosa has been noticed by various investigators since the classic observations of Dr. Beaumont on Alexis St. Martin; the gastric membrane becomes covered with a layer of mucus, and may even have an alkaline reaction near the pylorus, while the cardiac portion is acid. Mechanical irritation or material suitable for digestion will, as is well known, provoke secretion; but the latter of the two classes of stimuli is far more effective and prolonged in its influence. Furthermore, Professor Heidenhain, whose well known researches have contributed so materially to our knowledge of secretory processes in the body, was able to observe secretion in the isolated fundus, following the introduction of food into the remaining intact portion of the stomach; no such result were obtained, however, when the engested material was indigestible Heidenhain, therefore, distinguishes between a primary and a secondary secretion. The former is called forth by the mechanical stimulation of the ingesta, and is confined to the stimulated portions of the membrane; the latter is dependent upon absorption from the stomach, and is effective over the entire gastric surface; the one, a scanty secretion; the other, more copious and continued for a considerable period.

The facts already presented, although suggestive of a reflex mechanism, can scarcely be said to offer any striking evidence of a connection between the central nervous system and gastric secretion. At the most, the existence of local secretory centers in the stomach might be assumed. There is, however, another class of observations, more suggestive of nervous influence, which has been enriched by recent investigations. Certain mental conditions are well known to have a marked effect on gastric digestion. Bidder and Schmit long ago observed on dogs with fistulæ that the mere sight or smell of food stimulated secretion of gastric juice, even when the saliva was prevented from entering the stomach by ligation of the ducts of the salivary glands. Richet made similar observations on a human being, through a gastric fistula, in a case of complete stricture of the esophagus. Pawlow and Schumowa-Simanowskaja have repeated the older experiments by a somewhat novel method, and obtained some valuable results. A gastric fistula was established on dogs, and after recovery from the operation the esophagus of the animal was divided, the two cut ends being sewed to the edges of the wound in the neck. The animals usually survived the operation well, and continued to thrive for awhile. Feeding could be accomplished either through the fistulous opening in the stomach, or by the esophageal orifice, and the method employed allowed the animal to masticate in the ordinary way, while the introduction of food and saliva into the stomach was at the same time precluded. Psychical and other influences on gastric secretion could thus easily be studied without disturbance of the normal functions. The rate of secretion could be determined by the rapidity with which the gastric juice flowed from the canula in the fistula. After "false" feeding—to use a convenient expression—with meat in the manner indicated above, a pronounced increased secretory activity was manifested, as shown in the table below:

Time.	Gastric juice discharged in five minutes.
12:35	3.0 ccm.
12:40	3.0
12:45	2.4
FEEDING OF MEAT BEGUN.	
12:50	1.8 ccm.
12:55	10.8
1:00	15 4
1:05	17.8
FEEDING SUSPENDED.	
1:10	16.0 ccm.
1:15	12 0
1:20	10.8
1:25	8.6
1:30	7.6
1:35	6.2
1:40	2.8
1:45	2.6

It is interesting to note that such results were obtained with meat only; the ingestion of water, milk or soup failed to influence secretion. The investigators proceeded to study the character of gastric juice under the conditions referred to in the preceding paragraphs. A summary of the results of a single experiment will suffice to illustrate the general conclusions arrived at.

Gastric juice obtained in 5 minutes. ccm.	Acidity, per cent.	Total solids, per cent.	Digestive power.
4 4	0.456	0.350	2 75
"FALSE" FEEDING WITH MEAT.			
11.1	0.506	0.425	4.50
19.0	0.525	0.600	4.75
FEEDING CONCLUDED.			
14.0	0.527	0 575	3.75
5.2	0.516	0.483	4.75

It is thus to be observed that stimulation of a purely nervous character, as it must be in these experiments, calls forth pronounced changes in the composition of the secretion, viz., increase of acidity and total solids of the gastric juice, with increased digestive power. Similar changes have been observed in other secretory or-

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gans after stimulation. That this reflex secretion in the stomach is due to the action of true secretory nerves is suggested by the fact that the stimulation gives rise to the increased production of specific gland-constituents, aside from the increased flow of circulating blood through the parts affected. Yet, as Heidenhain has suggested, further evidence would be required to exclude the possibility that the results are due to an action primarily exerted on the muscular movements of the stomach.

If the secretion of the gastric juice under the conditions recorded is a reflex act, the question arises, What are the paths of the nervous impulses to the stomach? Obviously, either the vagi or the sympathetic nerves may be concerned here. The older experiments intended to answer this question have led to no certain results; the bulk of the evidence has indicated that the gastric glands still secrete when they are cut off from the central nervous system, and that, therefore, the nerves going to its secretory activity. Pawlow and Schumowa Simanowskaja haae again subjected the matter to experimental investigation. In dogs operated upon in the manner already described, section of the splanchnic nerves did not prevent the appearance of reflex secretion after "false" feeding of meat. Inasmuch as division of the vagi in the region of the neck causes so many undesirable results, these observers divided the nerves below the separation of the pulmonary and cardiac branches. The animals maintained a condition nearly normal for some time; but the "false" feeding by way of the mouth now failed to provoke secretion in the stomach. Heidenhain was unable to induce secretion by electrical stimulation of the nerves leading to the stomach; but in the investigations just recorded, a gradually increasing flow of gastric juice following a long latent period was observed when the peripheral stump of the severed left vagus was stimulated with induction shocks. The secreted fluid had, in one instance, an acidity of 0.37 per cent and a digestive action on proteids. With the end of stimulation secretion was checked. Similar positive results are also recorded by other recent investigators after vagus stimulation in pigeons and frogs.

The evidence has been given upon which rests at present, the conclusion that the secretion of the gastric glands is influenced by the central nervous system in a manner analogous to the secretion of the saliva and pancreatic juice. Such a conclusion does not exclude, by any means, other sources of stimulation. The coats of the stomach contain abundant nerve ganglia which may act as independent secretory centers; and furthermore, it is quite possible that secretion may also follow direct mechanical irritation of the secreting epithelium, without the intervention of any nervous arrangement. Such an action would be analogous to that in insectivorous plants; in Drosera, for example, the mere contact of an insect with the vegetable tissue suffices to call forth a secretion with distinct proteolytic power.—Lafayette B. Mendel, M.D , in *Dietetic and Hygienic Gazette.*

Naphthaline in the Treatment of Worms in Children.—The *Revue internationale de medecine et de chirurgie pratiques* contains an abstract of an article by Dr. Aurel Schmitz, which was published in the *Jahrbuch f. Kinderheilkunde.* The author enumerates the principal symptoms caused by the presence of these intestinal worms and cites the opinions of authors who have demonstrated that it is not in the rectum or even in the large intestine generally that these worms are habitually found, but in the upper part of the intestinal canal, and that local treatment by the rectal canal rarely attains the purpose for which it is employed. Naphthaline, being a very energetic antiparasitic and possessing at the same time the property of being insoluble in water, may thus, introduced through the stomach, pass through the intestinal canal without being decomposed. These qualities, says the writer, suggested to Unger the idea of employing naphthaline in the treatment of worms, and he related the results of his researches to Dr. Schmitz, who employed the method in the following manner: After having purged the patients several times he prescribed from eight to ten capsuls of naphthaline in doses of from 2·4 to 6·4 grains and more, according to the age of the child. Four of these capsules were taken during the day. Eight days afterward the same dose was repeated, and after a second interval of fourteen days a third dose was taken. In some rare cases, he says, a fourth dose may have to be given. The naphthaline should not be given immediately after meals, and oily or fatty food should be avoided, in order not to cause decomposition of the drug in the digestive canal and thus hinder its action. If it causes constipation a purgative should be given. In forty-six cases in which this treatment was used, twenty-six children were completely cured. In twenty other cases the results were less favorable; the symptoms were ameliorated, but there was no definitive cure. In three of the cases the return of the symptoms was so long delayed that they were thought to be cases of reinfection. In cases where success is doubtful Dr. Schmitz recommends repeating the treatment after an interval of several weeks, as the organism of children tolerates repeated doses of naphthaline very well. In one case only it causes strangury, but the symptoms were slight and transitory. The action of naphthaline is always more certain than that of santonine, and it is much less toxic. In all the cases treated enemata were not administered, but the administration of naphthaline through the stomach may be combined, with good resuls,twith deep irrigations, according to Hegar's method, especially when the patients suffer greatly from parasites that have penetrated deepiy. Ungar employed for these irrigations aluminum acetate in the proportion of a dessertspoonful to eleven spoonfuls of water. This astringent liquid kills the parasites situated in the deep parts of the digestive canal very quickly and allays the irritation of the intestinal mucous membrane.—New York *Med. Journ.*

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OBSTETRICS AND GYNECOLOGY.

Vaginal Fixation in the Treatment of Retro-Displacement of the Uterus.—Clinton Cushing, M.D., in the "Transactions of the American Association of Obstetricians and Gynecologists," says:

For the purposes of this paper it is assumed that a retroflexion or a retroversion of the uterus is a pathological condition that requires treatment on account of pain, both local and reflex, or on account of disturbed function, such as dysmenorrhea, menorrhagia, or sterility, and while it is true that in a small proportion of cases of retro-displacement in unmarried women, no untoward symptoms are manifest, the rule holds good that no woman may expect to long remain well unless her uterus is somewhere near its normal position.

As far as keeping the uterus in its normal position is concerned, and thereby relieving the disagreeable symptoms, I have successfully treated many hundred women with the various modifications of the Hodge pessary. Many of these women have been under observation for from three to six years, and at the end of from two to three years the pessary has been removed as an experiment, to determine if the uterus will retain its normal position without artificial support. Certainly not five per cent remain normal after removal of the pessary. In all cases the pelvic floor has been repaired where the woman has suffered injury to the part. The vaginal pessary then, in the treatment of retro displacements of the uterus, must be placed in the category with wooden legs, spectacles, and ear-trumpets; mainly as an aid to render life tolerable and comfortable, and not as a means for permant cure.

I have done Alexander's operation several times but have not been successful with it, and its has never become popular among operators, probably for the same reason.

I have opened the abdomen and fastened the body of the uterus to the anterior abdominal wall in at least twenty cases, mostly in connection with the operation for the removal of diseased tubes and ovaries, and have been pleased with the results. How large a proportion have proved an absolute cure I am unable to say, for many of the patients came from long distances and were not again seen after their convalescence, but among those who have remained under observation the results have been satisfactory. I do not know of a case that has since borne a child, and cannot, therefore, say what effect pregnancy would have on the fixation. Opening the abdomen for the purpose of curing retroversion seems to most patients, and to most doctors, a severe and unwarrantable procedure, and surely there ought to be little wonder that this view should be taken.

While in Berlin last summer, Prof. August Martin kindly demonstrated for me an operation that is called vaginal fixation of the uterus, which strongly impressed me on account of its simplicity and because it fulfilled so completely the indications.

The woman is placed in the lithotomy position at the edge of the table, a Simon's speculum introduced, the perineum retracted and the cervix drawn down to the vulva. A strong uterine sound is introduced into the uterus and the organ held by an assistant in a position of anteversion. An incision is made with a knife directly forward in the middle line from the cervix toward the urethra for two inches, the incision extending only through the vaginal tissues. The vagina is separated from the bladder on either side of the incision for half an inch, and the bladder is then pushed off the anterior wall of the uterus up to the peritoneal reflexion. This part of the operation is much facilitated by seizing the anterior wall of the uterus with a bullet forceps, drawing it down and steadying it. The bladder is then easily pushed upward and forward out of the way, a suture of silkworm gut is now introduced through the muscular wall of the vagina on one side of the incision, an inch and a half from the cervix, then through the anterior wall of the uterus, and out through the muscular wall at the vagina on the opposite side. The ligature is then tied and buried. A second suture is introduced in like form a half inch lower down, and the incision in the vagina closed throughout with silkworm gut.

The result is that the anterior wall of the uterus is drawn over and fastened to the anterior wall of the vagina, the bladder being pushed upward and forward.

During the past eight months I have performed this operation twelve times, and have been greatly pleased with the results. Most of the operations have been done in conjunction with the repair of the cervix and perineum. Given a case of retroversion with a laceration of the cervix and perineum, accompanied with endometritis, the following plan is pursued: The woman is kept under observation for two or three weeks before any operative procedures are undertaken. The uterus is carefully and thoroughly replaced while the woman is in the knee-elbow position, glycerine tampons are used, and this process repeated every 48 hours. As soon as it can be done safely a well fitting Hodge pessary is introduced and the uterus kept well forward. Thus the question of the mobility of the uterus and the condition of all the pelvic organs and tissues is clearly defined

If all goes well, at the end of three or four weeks, the patient is properly prepared by rectal and vaginal douches, and the uterus is thoroughly curetted, the cervical rents freshened, and silkworm gut sutures introduced but notshotted.

The vaginal fixation is next done, and afterwards the perforated shot, each with a small tag of black silk attached, are run up on the silkworm gut sutures in the cervix, compressed, and the sutures cut off flush with the shot. The perineum is then repaired after Tait's method, which I am firmly convinced is far the best, the silkworm gut and the perforated shot with black silk tags being again used. The next step I consider of im-

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portance, as it has much to do with the success of the plastic operations, and the ease and comfort of the patient during convalescence.

To each ounce of fresh well-made zinc ointment is added a grain each of morphine and cocaine. Two teaspoonfuls of this ointment are introduced into the vagina and thoroughly spread over the parts with the finger. A small teaspoonful is also introduced into the rectum. By this plan the local smarting and pain are rendered tolerable, and as the ointment escapes from the vagina the new perineum is kept covered and protected from the urine, none of which can pass into the vagina. Except in cases of offensive vaginal discharge, accompanied by fever, no vaginal injections are permitted for eight days, but the external parts are frequently douched with warm carbolized water, which is followed by an application of the ointment over the new perineum. On the eighth day a vaginal injection of carbolized water is given, and now by catching up the tag of black silk thread attached to each shot, the shot and ligature are brought into view. One side of the liga ture is cut, the loop removed with the least possible pain to the patient, and without disturbing the newly united surfaces. Ten days later a small Sims speculum is introduced and the stitches in the vagina and cervix are removed. In one case only has suppuration of the buried sutures occurred, but notwithstanding this, the union between the vagina and the uterus remains firm, and the uterus retains its normal position. I have thought best in all cases to have the patient wear a small Hodge retroversion pessary for the first three months aster the operation, in order to assist in keeping the uterus well forward until union becomes firm at the site of the buried sutures.

Manifestly if the uterus can be kept sufficiently far forward, so that the pressure of the small intestines is against the posterior wall of the organ, it will require but little force to keep it in place. If the uterus and vagina are made aseptic there should be no more danger from this operation than from any other of the plastic operations about the vagina.

Injury to the blader would appear to be the most probable accident, but with a little care and the exercise of ordinary skill this is easilly avoided. What has struck me as the most remarkable thing about the operation is that the patients do not complain of any irritation or pain about the bladder, which would naturally be ex pected when it is remembered that a considerable dissection is made of the tissues lying betweeu the vagina and the bladder, and the uterus and the bladder.

It is yet too soon to decide upon the real merits of this procedure, but judging from the good results observed thus far I think we are warranted in giving it a further trial. I do believe that the operation will prove successful where the uterus is large and heavy, or where the woman has suffered enough injury to the pelvic floor to permit the pelvic contents to sag much, and I therefore strongly advise anyone who contemplates this operation to first replace and keep in position the uterus for a month; then, when fixation is performed, to curette this organ thoroughly if advisable; to repair the cervix and pelvic floor should this be required; and to keep the uterus in a state of anteversion, by means of a pessary, for several months after the operation as a matter of safety.

Several years ago in a communication to this society, I advocated the claims of catgut as a suture. I now only use catgut for ligature when the parts are infected by pus. In plastic surgery it is not as reliable as silkworm gut, which I now invariably use for such work.

In the preparation of catgut, I have recently carried out an idea that appears to me to be of considerable practicable importance. Every one who has used catgut for ligatures must have been impressed with the fact that as soon as the catgut gets wet with water or blood, it becomes slippery, and the first knot does not hold well while the second is being tied. Eepecially true is this when working in dark corners where the view is obstructed by blood, as in the bottom of the pelvis following an abdominal section.

I now prepare catgut in the following manner: The coils of gut are first soaked in sulphuric ether for ten days, in order to render them aseptic. They are then put into a pint of pure alcohol in which has been dissolved an ounce of common rosin. By so doing I have found that the animal ligature whether wet or dry is sufficiently sticky to retain the first knot tied, without slipping, until the second is placed in position, and I know of no objection to the alcoholic solution of the rosin. This may seem a trivial matter, but I doubt not all will agree that many of our aids in surgery are in themselves trivial, but they make just the difference between failure and success.

The objection might be raised that by this operation we produce anteversion of the uterus and therefore a pathological state. I believe the so called anteversion of the uterus is the normal position of that organ when the bladder is empty, and that the various symptoms which have been ascribed to the so called anteversions are due to disease of the structure of the uterus, or to displacement of all the pelvic contents downward on account of injury to the pelvic floor, or to disease of the ovaries or bladder. For the last ten years, therefore, I have given up treating the so called cases of anteversion as such, and have succeeded in giving relief in such cases by curing endometritis and subinvolution, and by repairing injuries from childbirth.

I am the more inclined to call the attention of the society to the operation of the vaginal fixation because I have seen very little regarding it in the medical literature of the country.

Duhrssen of Berlin, who was one of the first to perform the operation, reports 140 cases without any fatal result, and with a permanent cure of ninety per cent. His method of operating varies slightly from the one described, inasmush as he makes the incision in front of the cervix, transversely of the vagina instead of longitudinally. The operation described is essentially that

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of Mackenrodt, who is assistant to Prof. Martin, and it was Mackenrodt who read the first paper on the subject.

The operation is manifestly contraindicated where the uterus from any cause is large and heavy, or where adhesions prevent its being easily placed in a state of so-called anteversion, for any dragging upon the buried sutures would certainly cause them to cut out. The operation is equally applicable to cases of retroversion or of retroflexion.

NOTES AND ITEMS

What People Will Eat a Century Hence.—According to Professor Berthelot, the distinguished French chemist, the time may be approaching when the farmer will go out of business, and bread and beef and milk, or their equivalents, will be produaed artificially in the laboratory of the chemist. It is true that we have not yet got beyond the first steps in the process, but, according to Professor Berthelot, who is entitled to speak with authority, these first steps are a guarantee of extended triumphs in the same field.

The Professor, as reported by Henry J. W. Dam, in *McClure's Magazine*, said that "new sources of mechanical energy would largely replace the present use of coal and that a great proportion of our staple foods which we now obtain by natural growth would be manufactured direct, through the advance of synthetic chemistry, from their constituent elements, carbon, hydrogen, oxygen and nitrogen." He continued: "I not only believe this, but I am unable to doubt it. The tendency of our present progress is along an easily discerned line, and can lead to only one end. I do not say that we shall give you artificial beefsteaks at once, nor do I say that we shall ever give you the beefsteak as we now obtain and cook it. We shall give you the same identical food, however, chemically, digestively and nutritively speaking. Its form will differ, because it will probably be a tablet. But it will be a tablet of any color and shape that is desired, and will, I think, entirely satisfy the epicurean senses of the future; for you must remember that the beefsteak of to-day is not the most perfect of pictures either in color or composition. There is a distinction which I would like to make at this point between the laboratory stage and the commercial stage of any given discovery in food-making. From the scientific point of view, the laboratory result is the important one. As you and all the world know, the commercial result follows inevitably in time. Once science has declared that a desired end is attainable, the genius of invention fastens upon the problem, and the commercial production of the result slowly attains perfection by gradually improved processes at less and less cost. Take aluminum, for instance. Once a very expensive metal, its steadily decreased cost in production is bringing it within the reach of all. The use of sugar is universal. Sugars have recently been made in the laboratory. Commerce has now taken up the question, and I see that an invention has recently been patented by which sugar is to be made upon a commercial scale from two gases, at something like one cent per pound. As to whether or not the gentlemen who own the process can do what the inventor claims, is is neither my province nor my desire to express an opinion."

The professor here cited as an instance of laboratory products, the dye stuff alizarin, the coloring principle of madder, which was formerly a great agricultural industry, but which is now almost wholly supplanted by the artificial product from coal tar. The chemists, he said, have succeded also in making indigo direct from its elements, and artificial indigo will soon be a commercial product. "Tea and coffee could now be made artificially if the necessity should arise, or if the commercial opportunity, through the necessary supplementary mechanical inventions had been reached. The essential principle of both tea and coffee is the same. The difference of name between thein and caffein has arisen from the sources from which they were obtained. They are chemically identical in constitution, and their essence has often been made synthetically. The penultimate stage in the synthesis is theo-bromine, the essential principle of cocoa. Thus, you see, synthetic chemistry is getting ready to furnish from its laboratories the three great non-alcoholic beverages in general use. And what is true of food substances is equally applicable to all other organic substances."

"As regards tobacco the Profefsor said: "The essential principle of tobacco is nicotine. We have obtained pure nicotine, whose chemical constitution is perfectly understood, by treating salomin, a natural glucoosed, with hydrogen. Synthetic chemistry has not made nicotine directly as yet, but it has very nearly reached it, and the laboratory manufacture of nicotine may be expected at any moment. * * * The tobacco leaf is simply so much dried vegetable matter in which nicotine is naturally stored. * * * Perhaps the greatest importance, and certainly the profoundest charm in the study of synthetic chemistry is the certain evidence which it offers of the discovery and manufacture of many compounds now entirely unknown, whose effect upon human health, human life and human happiness no one can possibly conjecture."

As regards the future supply of heat, which is no less important than that of food supply, Professor Berthelot speaks confidently of improved appliances enabling man to make use of the illimitable supply of the earth's central heat. In conclusion the Professor says: "If one chooses to base dreams prophetic fancies, upon the facts of the present, one may dream of alterations in the present condition of human life so great as to be beyond our contemporary conception. One can foresee the disappearance of the beasts from our fields, because horses will no longer be used for traction nor cattle for food. The countless acres now given over to growing

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grain and producing vines will be agricultural antiquities, which will have passed out of the memory of men. The equal distribution of natural food materials will have done away with protectionism, with custom houses, with national frontiers kept wet with human blood. Men will have grown too wise for war, and war's necessity will have ceased to be. The air will be filled with aerial motors flying by forces borrowed from chemistry. Distances will diminish, and the distinction between fertile and non-fertile regions, from the causes named, will largely have passed away. It may even transpire that deserts now uninhabited may be made to blossom, and be sought after as great seats of population in preference to the alluvial plains and rich valleys."—*Scientific American.*

A Warning to Stamp Collectors.—At the present day a man of any position in the medical world can scarcely be considered to have fully justified his existence till he has discovered a new disease, or at least some previously unsuspected source of danger to health. Dr. Unna, of Hamburg, may therefore be looked upon as doubly fortunate, for besides enriching nosology with more than one new disease, he has now made a considerable section of the human race still further his debtors by showing them that their favorite "hobby" has the added spice of danger required to make it completely delightful. Stamp collecting might at first sight appear to be a perfectly harmless mania, but here too, as in every other human pleasure or pursuit, it turns out that *latet anguis in herba.* There is a disgusting disease of the hair known as *piedra* (stone), and hitherto considered to be peculiar to Colombia in South America, where it is comparatively common among the fair sex. Men also suffer, though to a less extent, and chiefly in their beards. Black gritty particles form on the hair shafts; they are so hard that they rattle like pebbles (hence the name) when the comb is used. An unpleasant feature of the affection is a peculiar acid smell. The concretions have been found to consist of the closely packed spores of a special fungus. The disease is supposed to be connected with a mucilaginous substance which is greatly in favor with the native beauties of Columbia for anointing their dark tresses. Dr. Unna has satisfied himself that this interesting complaint can be conveyed to Europe by a somewhat unexpected channel. He has recently had under his care a professional brother whose beard was unquestionably affected with *piedra.* The patient had never been near Colombia, and the question was how could he have got the disease? It turned out, however, that he often received letters from Colombia, and he was in the habit of detaching the stamps by soaking them in water. Dr. Unna conjectures that he may have inoculated himself with the fungus which causes the disease while fiddling with his beard with fingers still wet with the water in which he had soaked the stamps. The theory appears to involve the hopothesis that the "mucilaginous substance" which is suspected of breeding the disease is used in Colombia for gumming stamps; but, at any rate, the case should be a warning to stamp collectors as suggesting the possibility of the importation of the germs of various inoculable diseases from their native haunts.—*British Medical Journal.*

The Treatment of the Naval Surgeon.—The injustice done the medical corps of the United States Navy in according to the members inferior rank and pay has long been known as a standing disgrace to the Government, says the *Buffalo Medical and Surgical Journal.* It is only second to that other scandal whereby junior officers are promoted over seniors—a method that deserves the execration of every intelligent American citizen. With a view to correct the former evil, Dr. P. H. Millard, of Minneapolis, introduced the following preamble and resolutions at the late meeting of the American Academy of Medicine in Baltimore, which received the unanimous approval of the Academy:

WHEREAS, Membership in the medical corps of the navy of the United States from having been, through its high professional attainments, once eagerly sought by graduates of medical colleges, has ceased to be attractive to them, so that it is no longer possible to fill its vacancies; and

WHEREAS, It is believed that this is due to the inferior rank given to entrants to the corps and their assignment, when at sea, to quarters in the steerage with undergraduates of the Naval Academy and civilian paymaster's clerks, while the young medical officer of the army begins his career a grade higher and in the commissioned officers' mess; and

WHEREAS, The professional requirements and qualifications, the professional duties and obligations of the medical officers of the army and navy are identical, therefore, be it

Resolved, That the attention of the Senate and House of Representatives of the United States be invited by the American Academy of Medicine to this inequality, and that the naval committees of the two houses be urged to inaugurate such legislation as shall confer upon the officers of the medical corps of the navy the same status, pay and emoluments as are now accorded to the medical officers of the army.

Resolved, That this resolution be printed, and copies of it, certified by the President and Secretary of the association, shall be sent to the President of the United States, the Secretary of the Navy, and to every member of the Fifty-Fourth Congress.

Similar action was taken by the American Medical Association a day or two later.—*Medical Record.*

Motes and Beams.—The American Humane Education Society boasts that:

"1. It has contributed money to aid the anti-vivisection societies in sending out their literature.

"2. It has now a standing offer of $100 for evidence to enable it to convict any man in medical schools or elsewhere of a violation of the laws of Massachusetts

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by the infliction of cruelty in performing vivisection on any animal."

With this record as a practical and indiscriminate supporter of anti-vivisection and as a spy upon medical teachers, it sends forth to the medical profession and others a series of questions, and requests replies stating whether (1) the respondent believes in vivisection without restrictions; (2) in vivisection restricted by utility; (3) in vivisection without pain; or, (4) in abso lute prohibition of vivisection.

Such an attempt to secure evidence is, on the face of it, farcical. Those who answer will mainly be those who have taken some fanatical interest in the subject, and they will naturally give their vote for anti-vivisection. We expect before long to see some alleged ingenuous statement showing that out of five thousand replies, only five have responded in favor of vivisection! The first instinct of most sensible people in seeing such a document will be to ask why is so much fuss made over vivisection, which hardly exists in this country, when animals are being so constantly tortured by hunters, fishermen, pigeon-shooters, and drivers of dock-tailed horses. Let this alleged Humane Society remove the serious cruelties of sports; stop deer-shooting, pigeon-shooting, fox-hunting; then they can address themselves to the relative trivialities of vivisection.—*Medical Record.*

Increase of Drunkenness in France.—The increase of drunkenness is attracting attention among sociologists, legislators and medical men in France (*Med. Rec.*). At the recent Scientific Congress at Caen this question occupied an important place in the discussion. At a special congress of the Ligue Contre l'Im moralite Publique, held at Lyons, the repression of alcoholic intemperance was one of the principal subjects under consideration. Dr. Legraine, chief physician to the Asile de Ville Evrard, read a remarkable report, in which he said that drunkenness is leading France to its ruin. Dr. Pierret, chief physician of the Brou Asylum, and Clinical Professor of Mental Diseases, treated the question of what he terms "unconscious drunkards" who are never drunk, but daily drink more alcohol than the animal economy can tolerate. Dr. Motet minutely described the morbid conditions resulting from an abuse of alcohol, in most instances leading to crime. Dr. Rey, chief physician of the Marseilles Lunatic Asylum, stated that Marseilles, which was formerly remarkable for sobriety, is now no longer entitled to this distinction. Formerly one asylum was sufficient for four departments—the Bouches due Rhone, Var, Gard and Corse; now it scarcely suffices for the needs of the Marseilles population. There are three hundred children in the City School feeble in mind and infirm in body, who are unable to derive benefit from the education given them. There are as many more children whom the school can not take. Dr. Rey concluded by saying that, if the evil is not checked, he fears France will become a prey to cretinism.

Gold Preferred to Silver.—The San Francisco Post says: A young lady with a touch of tonsillitis was consulting the family physician.

"That is nothing serious," said he. "I'll touch it up with a nitrate of silver and you will be all right."

The young lady looked a bit doubtful.

"Oh, it won't hurt you," remarked the doctor, reassuringly.

"I wasn't thinking of that. Papa might object."

"Why, what possible objection can he have?"

"I heard him tell mrmma the other evening that he was opposed to silver. Couldn't you use nitrate of gold? Silver is so common and cheap, you know, and I am sure papa wouldn't object then."

The Intermediary Nerve of Wrisberg.—At a recent meeting of the *Academie des sciences*, a report of which is published in the *Gazette medicale de Paris*, M. A. Cannieu remarked that the nerde of Wrisberg had been the subject of much discussion. According to some authors, it was a motor nerve; to others, a sensory nerve. In 1878 M. Mathias Duval had made out an aberrant branch of the glosso-pharyngeal nerve toward the sensitive centre to which, according to him, the intrabulbar fibres of this nerve were directed. Having made some researches, said M. Cannieu, on the internal ear, he had observed certain facts which enabled him to confirm this interpretation. Thus, among rodents he had ascertained the existence, which had been denied up to that time, of the intermediary nerve of Wrisberg; on the other hand, among bony fishes he had seen the cellular extensions united in bundles which, he said, should be considered homologous to the intermediary nerve of Wrisberg and as an aberrant branch of the glosso-pharyngeal nerve.—New York *Med. Journ.*

A Donation of Half a Million of Dollars to the University of Pennsylvania.—Mr. Charles C. Harrison, who for the past year has been Acting Provost, was elected Provost of the University of Pennsylvania on the 4th inst. Upon accepting the office, he announced his intention of presenting, as a special endowment fund, the sum of $500,000, the income to be devoted exclusively to educational purposes, and not for building. His idea in making this magnificent foundation was to honor the name of his father, Mr. George Leib Harrison, well known as a writer upon social, economic and educational problems to the practical solution of which he devoted the greater part of his leisure, while successfully conducting a large business of which he was the head. The conditions of this donation have not been definitely or finally settled, but it is understood that it is intended to be principally devoted to founding scholarships, for extending post-graduate instruction, and in assisting teachers to devote themselves to special branches of instruction for which they are particularly adapted, but from which, otherwise, the want of funds would debar them.—*Jour. Am. Med. Ass'n.*

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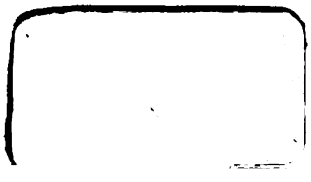

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